

THE CRITICAL REVIEW.

For the Month of November, 1776.

A Treatise upon Artificial Electricity, in which are given Solutions of a Number of interesting Electric Phenomena, hitherto unexplained. To which is added, an Essay on the mild and slow Electricity which prevails in the Atmosphere during serene Weather. Translated from the Original Italian of Father Giambatista Beccaria. 4to. 18s. in boards. Nourse.

THE electrical phenomena are ranked amongst the many discoveries with which the industry of a few modern experimentalists has enriched the science of philosophy; and of all the laws of nature perhaps they are those alone, the knowledge of which contributes not only to public advantage, but likewise to private entertainment. Father Giambatista Beccaria, the author of the present work, appears to have studied the theory of electricity with great attention, and carefully examined the doctrines of those who have written on the subject, by reducing their several principles to the test of experiment.

The volume is divided into six sections, of which we shall give an account in their order.

Section I. treats of the theory of artificial electricity, especially in deferent or conducting bodies, deduced from the circulation of the electrical fire in the ordinary apparatus. The first chapter of this section contains a compendium of the theory; the second presents us with an account of the electrical apparatus; and in the third the author evinces the truth of what he calls the Franklinian theory, from its uni-

versal conformity with the extensive laws of unity, non-existence, and connection, to which the electrical signs, in the ordinary apparatus, are subject. Our readers will remember that the following are the general principles of Franklin's theory. "1st. The electrical fire is diffused in all bodies universally, and balanced there with itself. 2dly. And universally. If the natural proportion of electrical fire in bodies becomes altered, this fire spreads itself from the bodies in which it is thus become superabounding, into those bodies where it is become wanting, with a force proportioned both to its relative excess, and to its absolute density; and in such passage through the resisting medium, it produces electrical signs. 3dly. And in the ordinary apparatus, the glass, when rubbed, draws from the rubbing machine its natural electrical fire; and in revolving, carries to the chain, into which it diffuses it, at that place to which it passes nearest." In the three subsequent chapters, the author explains, separately, the laws of the distribution, indication, and excitation, of the electrical fire, in conformity with the theory above mentioned.

SECT. II. is employed on the theory of insulating bodies, with regard to the charging and discharging of them. In the first chapter the experimentalist proves this doctrine by the help of the brush and little star, on plates of glass, and other insulatory bodies. In the second chapter the same theory is confirmed by simple charges, and discharges, made in different ways; in chapter third, by a combination of two or more charges and discharges; and in chapter fourth, the theory is farther confirmed, by charges and discharges of glasses, to which the vacuum serves as a coating. The fifth chapter treats of the causes that lessen, or prevent, charges; the sixth, of the preservation of charges, and increasing of discharges; in the seventh some questions are resolved, serving still more to confirm the theory on the charges and discharges of insulating bodies: in the eighth, the author treats of the charges and discharges produced by friction.

SECT. III. is allotted to the consideration of pressing electricity, or electric atmospheres. The first chapter treats of the first and principal property of electric atmospheres; and of the other and secondary properties of the same, which immediately proceed from the former. In chapter second, the author farther demonstrates the properties of electric atmospheres, by experiments chiefly made within cavities in different bodies. He also demonstrates the superficiality of the electricity of *deferent* electrified bodies; and he offers a few conjectures concerning the proportional quantity of the electric fire, within the substance of *deferent*, and of insulating bodies. In

In the third chapter the author confirms the three properties of electric atmospheres, by experiments made on convex bodies. He also explains the power of exciting atmospheres of a contrary kind on the same body; and determines the point where an equilibrium between those atmospheres takes place. In the fourth chapter he examines the duration of electric atmospheres, and the state of electricity in air which is continually renewed. He likewise attempts to form more complete principles with respect to the equilibrium and the motion of the fire: treating next of the general motion of the electric fire contained in a body, towards that place whence a spark is drawn; and of a certain curvature which takes place in this spark, in consequence of this same motion, the law of which is ascertained.

Sect. IV. comprehends a review of vivid electricity, or electric sparks. The first chapter treats of sparks relatively to the air. This chapter is subdivided into sections; the first of which inquires into the resistance which air opposes to sparks; the second is employed on the manner of the action which electric sparks exert on the air; the third, on the extenuated shape of sparks; the fourth, on the crooked direction of sparks across the air; and the fifth, on the division, and on the union of sparks across air, and particularly on the division with circles and rings, observed by Dr. Priestley. The second chapter treats of sparks relative to water, and other liquids; and the third treats of the action of sparks on living bodies. This chapter is also divided into sections. Of these the first is employed on the action of sparkling electricity on living bodies; the second, on the action of electricity on living bodies; the third, on the medical uses of the sparkling and not sparkling electricity; and the fourth, of the use which nature can make of electricity with regard to living bodies.

As this is almost the only part of the work that is detached from experiments, we shall present it to our readers.

‘ With regard to atmospheric electricity it appears manifest, that nature makes an extensive use of it for promoting vegetation. I. In the spring, when plants begin to grow, temporary and electric clouds begin to appear, and pour frequent electric rains; the electricity of clouds, and of rain, increases afterwards in summer, and continues to do so, till that part of autumn in which the last fruits are gathered; so that it appears, that the electricity which obtains in clouds and rain, when carried to a certain degree, serves to promote, with regard to vegetation, the effects of common heat.

* II. It even seems that electricity successively supplies common heat itself, with that moisture, by the help of which it actuates and animates vegetation; which, if heat acted alone, would inevitably be stopped. In fact, it is the electric fire that gathers the vapours together, forms clouds with them, and afterwards dissolves them into rain; it is the same fire, therefore, that supplies the earth with the nutritive moisture which is necessary to plants; and this moisture, by melting the terrestrial saline particles it meets with, by diffusing them along with itself into the inmost pores of plants, causes them to grow and vegetate with such admirable incomprehensible regularity.

* III. The common saying of countrymen, *that no kind of watering gives the country so smiling a look as rain*, may be explained on the same principle. The rainy clouds, by extending their own electric atmospheres to plants, dispose the pores of the latter to receive with greater facility, the liquid which is soon to follow; and the succeeding drops penetrate into them the better, as every one carries along with it a portion of the penetrating dilating element.

* I know that the regular distribution of water which is made by rain, also contributes to render it particularly useful; it even seems to me, that to each season belong kinds of rain more or less lasting, more or less sudden, and falling in larger or lesser drops, according to the different kind of vegetation, which, in every season, are to be promoted; now, do not all these differences chiefly proceed from the different degrees of the electricity which such rains distribute, or rather accompany. I have the knowledge of several facts, with which I propose, in time, to increase the probability of these my former conjectures.

* Besides, the mild electricity by excess, which, as I have observed for these many years past, constantly prevails when the weather is serene, certainly contributes to promote vegetation, in the same manner as experiments have shewn us, that this is likewise the effect of the artificial electricity *without sparks*. And is it not likely, that the former kind of electricity promotes vegetation still better than the latter can do, since nature increases it and lessens it, in such circumstances, and at such times, as particularly require it.

* The influence of electricity on living animals is not so manifest, nor can it be so immediate. We cannot, indeed, doubt but animals, birds for instance, indicate the changes of weather. When I have leisure enough to visit the electric observatory which I have established in the gardens of the Valentino, I am constantly informed of future changes in the state of the weather, by hems which I observe flying from north to south (Atmos. Terr. Elect. p. 268.) and thus I see the prognostic of Virgil verified. *Notasque paludes deserit, atque altam supra volat Araia nubem*; nature continues to be the same, and consequently ob-

observations are also the same in different ages. However, it is a difficult matter really to distinguish whether such signs from animals, proceed from any particular stimulation exercised on their fibres by the atmospheric electricity, at the time when an alteration of its state takes place, or from the joint alterations of the degree of the dampness in the air, of the winds, and of the electric state of the clouds; which are causes, no doubt, sufficient to determine in different ways the feelings and motions of animals.

‘ A greater and more regular connexion seems to take place between certain peculiar sensations, which some persons experience at certain changes of weather, and the state of the atmospheric electricity which causes such changes. Such is the case of which signor Mazeas sent an account to Dr. Hales (see Dr. Priestley’s Work, p. 414.) of a person who was particularly subject to epileptic fits when claps of thunder took place; but though this person assured him, that the fear of thunder was by no means the cause of his disorder, and that he felt a real connection between the above phenomena and his epileptical fits; yet, I must still confess, that I do not understand how an alteration in the atmospheric electricity can produce such effects

‘ A single consideration more with respect to living bodies in general, I shall add to those I have offered the reader, which is, that both in animals and men, that kind of motion is found to take place in a very eminent degree, which is apt to raise an electricity. From the friction that takes place between two bodies, of which the one is insulating and the other deferent, or also between two insulating bodies that are of a different, or even of the same nature, but of which the one suffers a greater friction than the other, from such frictions, I say, a greater or less electricity is excited; now, why should not the strong perpetual friction exercised by the blood against the venal, or arterial vessels, also excite electricity? Why should not a small globule of blood, while it rubs against a given part of an artery, diffuse into it some of its own electric fire, or receive some new portion from the same? I admit, that for all this no visible electricity will take place in the man, nor will any electric atmosphere be formed around him, since through the deferent moisture in his body, the electric fire will continually circulate towards the place of the friction, there to re-establish the equilibrium; but then it must be observed, that I do not mean to speak of an electricity that is accumulated, I only speak of an electricity that is simply excited; certainly, when I rub a cylinder either internally coated, or wet on the outside, a certain quantity of fire passes from my hand to the cylinder, though, either the internal armature, or the external moisture, are perpetually restoring the equilibrium which the friction continually tends to alter; and I really think, that such a perpetual excitation.

tation, as mentioned above, both takes place, and produces very beneficial effects, in the animal economy.'

Chapter fourth treats of sparks relative to fossils especially; chapter fifth, of the electric fire, relative to common fire; and chapter sixth, of electric sparks relative to light.

Sect. V. is occupied with an experimental inquiry concerning the electric tickling and wind; and likewise concerning the brush and the star; which are severally treated of in the three chapters, of which the section consists.

Sect. VI. contains experiments on electric motions. This section is divided into two parts, each of which is subdivided into chapters. The first treats of the law and measure of the retrocession of deferent bodies in open air; the second, of the motions of deferent bodies towards each other; of the composition of such motions, with their motions from each other; and of the alterations that arise in these motions from differences in the masses of the bodies. Chapter third is employed on the motions of actual diffusion in the electric fire; chapter fourth, on the motion of bodies immersed in an electric medium; chapter fifth contains an examination of electrical motions performed in dilated air; and chapter sixth investigates the causes of electric motions.—The second part of this section is employed on the electric motions of insulating bodies, and on the *vindicating* electricity. This part is subdivided into two chapters: the first of which treats of the electric motions, and the vindicating electricity of insulating bodies of a rare texture, consequently incapable of a charge; and the second treats of the vindicating electricity of compact, solid, insulating strata.

These investigations are succeeded by an inquiry concerning terrestrial, atmospheric electricity, during serene weather. It is comprised in three letters; the first of which treats of its perpetuity and constant manner of acting, and of the alterations that take place in its intensity, in consequence of the changes in the state of the air; the second is employed on the daily period of the atmospheric electricity during serene weather; and the third, on the electricity produced by evening dew.

This treatise is of such a nature as admits of few observations. The numerous experiments which it contains, however, afford abundant proof of the ingenuity and industry of the author, who is, without doubt, one of the most eminent writers of the age, on the subject of electricity. Notwithstanding the great extent of the present work, we cannot affirm that father Giambatista Beccaria has actually much enlarged

larged the bounds of this curious part of philosophy, but it must be acknowledged that he has both elucidated and established upon stronger evidence, the theoretical system which is most generally received of the phenomena of electricity. The work is illustrated with many plates, and appears to be faithfully translated.

An Answer to the Declaration of the American Congress. 8vo. 2s. Cadell.

IN the introduction to this pamphlet, the author suggests a satisfactory reason for the neglect with which the Declaration of the American congress has been treated by government. He observes, that for the sovereign to have descended to an altercation with revolted subjects, would be tacitly recognising that equality and independence which they have the audaciousness to assert; and that to appeal to other states on matters relating to his own internal government, would be recognising the right of foreign powers to an interference from which they ought ever to be excluded. But what is incompatible both with the dignity and policy of the sovereign, a private individual may with propriety be allowed to perform. Upon this principle therefore, the writer enters into a minute and elaborate analysis of the Declaration of the American Congress, which he clearly shews to be destitute of any solid foundation. For the sake of perspicuity, he has numbered the several charges, in the order in which they stand in the Declaration, and replied to each in a separate article.

The first article is, "He (his majesty) has refused his assent to laws, the most wholesome and necessary for the public good."—In answer to this false assertion, the author observes, that to give force to the colonial laws *in general*, the assent of the king is not necessary; but from the moment that any colonial bill has obtained the sanction of the provincial assembly, and of the governor, it has all the force and effect of a law; a circumstance in which, as our author remarks, the colonies have an advantage over Ireland, where a special commission is required to empower the lord lieutenant to give the royal assent to each specific bill.

This discretionary power, however, entrusted to the governors of provinces, is of too sacred a nature to be unlimited by any controul; and the king therefore retains the power of disallowing all laws to which the governor may have assented, if they be found to be inconsistent with the tenor of his instructions, the good of the particular province, or the

general welfare of the empire. Our author observes, that in the colony of Massachusetts Bay, this disallowance must be signified within three years; in that of Pennsylvania, within six months from the time that the law is presented to the king in council; and in all the others without limitation of time. The author farther remarks, that this power has been exercised by all the king's predecessors; and that this charge in the Declaration amounts to no more, than that his present majesty is cautious in giving stability to the acts of the colonial assemblies, till experience has proved them to be useful; and that to disallow what appears not fit to be allowed, is the very end for which the power of disallowance was reserved to the crown.

Art. II. "He has forbidden his governor to pass laws of immediate and pressing importance, unless suspended in their operation till his assent should be obtained; and when so suspended, he has utterly neglected to attend to them."—The author evinces, by the most incontestible evidence, that so far as this article is brought to establish the charge of usurpation in his present majesty, it is absolutely false; and he makes it fully appear, from a variety of pertinent considerations, that the complaint is equally frivolous and destitute of foundation.

Art. III. "He has refused to pass other laws for the accommodation of large districts of people, unless those people would relinquish the rights of representation in the legislature; a right inestimable to them, and formidable to tyrants only."—A part of the author's sensible reply, may be sufficient for the refutation of this false and insolent paragraph.

"Let the sense of this article be precisely expressed; strip it of the indecent reflections which clothe it, and to what does it amount? To this only—That his majesty has not seen fit to *confer* the privilege of sending members to the provincial assemblies, on people forming, or meaning to form, certain communities in certain districts.

"The members of the congress indeed—whether through inadvertence, or design, have so worded this article, as to make it convey an idea, which yet they dared not openly express. They talk of *relinquishing* a right:—but they will not pretend it to have been a condition proposed, that the persons to be accommodated were to *give up* any right which they *then actually* enjoyed; the condition was, only, that they should *not* be *invested* with a right, which they *did not* then enjoy; if, as inhabitants of one district, or members of one community, they had already a right of sending a representative, they were not called upon to *relinquish* that right: they were only told that, in becoming inhabitants of another district, members of another community, the right would not be conferred on them. Though, from the inaccuracy of the phrase, it may seem to be insinuated, it is not meant, that his majesty intended to *diminish*, but only that he refused to *increase* the actual number of representatives. And is this too a proof of usurpation? Is the

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exercise of this power, in *general*, to be deemed unconstitutional? In this *particular* instance, did the refusal, of which the congress complains, originate with his present majesty? or in making it, did he only persist in a plan, for wise reasons, adopted by his royal predecessor?

Art. IV. "He has called together legislative bodies at places unusual, uncomfortable, and distant from the depository of their public records, for the sole purpose of fatiguing them into a compliance with his measures."—To this extraordinary objection, the author replies in a strain of deserved ridicule.

Art. V. "He has dissolved representatives houses repeatedly, for opposing with manly firmness his invasions on the rights of the people."—The charge contained in this article, as our author observes, amounts to nothing. For it states only that his majesty has exercised a power, which has always been considered as inherent in the crown. With respect to the particular instances, however, of the exertion of this power in the present reign, the writer fully justifies their necessity.

Art. VI. "He has refused for a long time, after such dissolutions, to cause others to be elected; whereby the legislative powers, incapable of annihilation, have returned to the people at large for their exercise; the state remaining in the mean time exposed to all the dangers of invasion from without, and convulsions within."—After shewing that the power exercised by his majesty in this instance was perfectly constitutional, the author observes, that

'The consequences drawn by the congress from this charge, are too singular to pass unnoticed. For, in the first place, these great statesmen, and acute legislators, have discovered, that by this refusal of his majesty to call a new court, before the constitution required it to be called, "*The legislative powers, incapable of annihilation, have returned to the people at large for their exercise.*"

'This maxim, I presume, is general: as good on one side of the Atlantic, as on the other. Hence then we learn, that, in this country, during the *annual prorogations*, and between the septennial dissolution of one, and the election of another, parliament, the legislative powers return to the good people of England. They may repeal all the laws enacted by parliament—impose new *tests*, create new *offences*, invent *new* punishments. A discovery which will not fail to astonish, as well my lords the judges, as the writers on our law.

'In the next place, they have discovered, that, during this interval, "*the state*"—meaning the respective colonies—"remained exposed to all the dangers of invasion from without, and convulsions within."

'As to the danger of *invasion from without*, how the dissolution of their general courts should invite, or their being assembled, should repel it, is more than I am able to conceive.—*Non tali auxilio—Non his defensoribus*—must this ungrateful country secure itself from

from foreign invasion. Those invasions have been repelled, have been for ever prevented, by the courage of that people, by lavishing the treasures and the blood of that nation, by the armies, the victories, and the treaties, of that prince, whom they now so ungratefully revile.

‘As to the danger of *convulsions within*, so far were their assemblies from repelling, that it was their factious resolves which excited, cherished—in the eyes of a deluded multitude, more than legalised—almost sanctified them.’

Art. VII. “He has endeavoured to prevent the population of these states; for that purpose obstructing the laws for naturalization of foreigners; refusing to pass others to encourage their migrations hither, and raising the conditions of new appropriations of lands.”—The author justly remarks that this charge is neither true nor possible; and that to have consented to these provincial laws, the king must have suspended acts of parliament. With respect to the raising the purchase and rents of lands, he observes that his majesty has only followed the example of the proprietors.

Art. VIII. “He has obstructed the administration of justice, by refusing his assent to laws for establishing judiciary powers.” Answer.

‘There is not, perhaps, in the whole science of government, a point more difficult than the regulation of the judicial power. There is nothing upon which the peace of individuals more immediately depends; nor can any material change be made in the regulation of this power, without, in the event, affecting the whole constitution. It is therefore, of all others, the point in which a wise government will be most fearful of admitting alterations.’

‘It will not therefore appear strange, that his majesty should have been very delicate on this point. That he should have been very averse to giving his assent to laws, whose object was to establish new judicial powers, or to admit any new regulation in those already established.’

‘For the reader is not to imagine, that there exists a single colony, where judicial powers, where courts of justice, are not established. They are established in *all*. In all those who have sent deputies to the American congress, these powers are regulated, as near as may be, on the model of the judicial power in England.’

‘Some of the colonies wished to introduce innovations, to establish certain courts of justice upon principles which seemed to his majesty to clash with the general principles of the constitution. To the establishment of these courts the king refused his assent.’

“*NOLUMUS leges Angliæ mutari*,” was thought to be expressive of the height of patriotism in the mouths of the *barons* of old. It was reserved to the American congress to discover, that an unshaken attachment to the established principles of a free constitution is a proof of tyranny and usurpation in a king.’

Art. IX. “He has made judges dependent on his will alone for the tenure of their offices, and the amount and

payment of their salaries."—The respondent observes, in answer to this charge, that the judges always depended on the king for the tenure of their offices. That in respect to their being dependent on the king for their salaries, the necessity of this dependence reflects shame on the colonists, who refused to grant permanent salaries to the judges. The author farther remarks, that the dependence of the judges on the crown is infinitely less entire, and less likely to be abused, than their former dependence on the people.

Art. X. "He has erected a multitude of new offices, and sent hither swarms of officers to harraß our people, and eat out their subsistence,"—Answer.

' To articles, thus generally worded, it is not always easy to give an answer. In the instance before us, however, we are under no difficulty. The "*multitude of new offices created, and the swarms of officers sent over to America,*" under the *present* reign, consist, first, in a board of customs; and secondly, in additional courts of admiralty.

' As to the board of customs, the reasons of that establishment are expressed in the preamble of the act. There it is we learn, that the officers who had been appointed in virtue of an act of Charles the Second, were obliged to apply to the commissioners in England for special instructions in particular cases; that hence all who were concerned in the commerce of the colonies, were *delayed and obstructed* in their commercial transactions; as a *relief* therefore to merchants and traders, his majesty is empowered to appoint commissioners of customs, with the *same* powers as are exercised by the commissioners of the customs in England.

' To cite the reasons of establishing this board, is at once not only to justify the establishment, but to prove its utility to the very men who complain of it.

' But "*the swarms of officers*" required to carry the act into execution "*eat up the subsistence of the people.*" With what indignation must this charge be received, when it is known, that to these officers, *no salary was given by the Americans; no salary demanded from them?* When it is known, that by no less than three several acts of parliament, it is provided, that these officers shall take only the *accustomed fees?* The payments to be made depend now, as they ever have done, on the *greater or less quantity of exports and imports;* not on the *smaller or larger number of officers* appointed to receive the duties.

' The courts of admiralty were multiplied for the same benevolent purpose, of giving *ease to the Americans* their selves. That the defendants might not be forced, in the first instance, to apply to a general court, held perhaps at an inconvenient distance; nor in the dernier resort, to appeal to the courts in England. *Before* they complained "*that the means of justice were so remote, as to be scarcely attainable.*" Now they complain that the means of justice are *brought to their own doors.*

The author afterwards shews the benefit resulting from the appointment of these courts, suppressed by the congress.

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Art. XI. "He has kept among us in times of peace standing armies, without the consent of our legislatures."—The commentator replies to this charge, by justly observing, that the measure was not only legal, but praiseworthy; as the troops were necessary both on account of new acquisitions, and the Indian war.

Art. XII. "He has affected to render the military independent of, and superior to, the civil power."—Answer.

'To what act of his present majesty's government, this general charge, unsupported by any proof, by the shadow even of a proof, can be meant to allude, is more than I can take upon me to determine, or even to guess. By what act has his majesty declared, that the soldiers of any regiment or corps, that the officers, that the commander in chief, should be unamenable to the *civil* courts for *civil* offences? Has not one officer been tried for his life? How then has he affected to render the military *independent* of the civil power? If *dependent* on the civil power, they cannot be *superior* to it.

'In civil matters they are dependent on the civil magistrate; the powers only, which are necessary for the discipline and government of the troops, are lodged in the hands of a commander in chief. In the same hands they were lodged during the reign of his majesty's royal grandfather. There his present majesty found, and there he left them.

'It was during the late reign, in the year 1756, that a commander in chief of the forces in America was first appointed: the first commission was given to lord Loudon: and that commission was drawn up by a man, distinguished for his knowledge as a statesman, his abilities as a lawyer; and yet more distinguished by his zealous attachment to the constitution of this country. He at that time held the seals: he affixed them to the commission. The form of the commission, the powers conveyed by it, remain the same to this hour: by his present majesty, no alteration has been made; no new powers have been conveyed to the commander in chief.'

Art. XIII. "He has *combined* with others to subject us to a jurisdiction foreign to our constitution, and unacknowledged by our laws; giving his assent to their *pretended* acts of legislation."—In this paragraph, as the author observes, the congress throws off the mask. For those with whom the king is so *respectfully* said to have combined; and to whose jurisdiction the purpose of this combination is to subject the Americans, are *the lords and commons of Great Britain*, whose jurisdiction the congress describe as foreign to their constitution.

Art. XIV. "For quartering large bodies of armed troops among us."

'This article, says the author, so far as it relates to the bare *stationing* of the troops in America, has been already answered under the eleventh article.

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‘ So far as it relates to the providing of *quarters* for the troops, it scarcely deserves an answer. The one is the necessary consequence of the other. If troops may be stationed in America, quarters must be provided for them in America. If troops be stationed for the purpose of protecting a particular place, quarters must be provided in, or near that place. If the provincial magistrates be either not empowered, or not inclined; and if the provincial assemblies will not, or cannot, empower, and even compel the magistrates to assign such quarters, what is to be done? One only body there is, whose controuling power superintends the whole of the empire; that body is the parliament. From parliament therefore the magistrate must receive those powers which he cannot obtain from the provincial assemblies.’

The respondent afterwards observes, that a still greater power is exerted in Ireland, and that there is nothing oppressive in the mode of quartering the troops in America.

Art. XV. “ For protecting them by a mock trial from punishment for *any murders* which they should commit on the inhabitants of these states.”—As the allegation contained in this infamous charge is totally repugnant, not only to truth, but to his majesty’s known justice and clemency, it is unnecessary to insert the author’s answer, which is however sufficiently just and decisive.

Art. XVI. “ For cutting off our trade with all parts of the world.”—The author justly observes of this article, that it represents an act of self-defence, exerted in consequence of resistance, as an act of oppression tending to provoke resistance; and that the act did not pass till ordinances had been made in the colonies to stop all communication with Great Britain.

Art. XVII. For imposing taxes on us without our consent.”—This article, which is the grand foundation of the contest, has already been often refused, and is likewise fully invalidated by this writer.

Art. XVIII. “ For depriving us in many cases of the benefit of trial by jury.”—It is, as our author observes, to cases cognisable in the courts of admiralty that this article alludes. He remarks, in answer to the charge, that it implies no proof of usurpation, unless these courts were unknown till the present reign, or their jurisdiction be extended to new cases. The truth is, however, that these courts were established long before the present reign; nor is their jurisdiction extended to new cases.

Art. XIX. “ For transporting us beyond sea to be tried for pretended offences.”—The *pretended* offences to which this article alludes, are no other than *treason*, *misprision* of treason, and *burning* his majesty’s yards, arsenals, ships, or stores; and so groundless is the charge of innovation in respect to the practice of trying such atrocious delinquents in England, that

an act was passed for that purpose upwards of two hundred years ago.

Art. XX. "For abolishing the free system of English laws in a neighbouring province, establishing therein an arbitrary government, and extending its boundaries so as to render it at once an example and fit instrument for introducing the same absolute rule into these colonies."—Answer.

"What have the revolted colonies to do with his majesty's government of another colony? Canada is not dependent on, is not associated with, them. Do the mighty heroes, who defy the united force of Britain, begin to tremble at a single province? Are they, who pledge their lives, their fortunes and their *sacred honours* in defence of liberty, so fearful of the strength of their own attachment to liberty, that they dare not look on men, who have submitted to what they call *arbitrary government*; lest they too catch the contagion, and follow the *example*? Or are they fearful, that their deluded followers may at length discover, that whilst their leaders are alarming them with acts of *pretended* tyranny, they are really bringing them under subjection to the worst of all tyrants—artful, selfish demagogues?

"No regulation concerning *another* colony can have any right to find a place in the list of their own pretended grievances. This would be answer sufficient to this article. Let us however see, if the going thus out of their way to make a charge so foreign to their own concerns, be compensated by any degree of candor? What is their objection to the act for regulating the government of Quebec?

"The first is, that by this act, the bounds of Canada are extended. There are little circumstances which materially change the nature of a transaction: these a skilful narrator tells, or suppresses, as best may suit his purpose. It suited the purpose of the congress to suppress, that in this act it is expressly provided, that "*the boundaries of no other colony shall in any wise be affected!*" that all rights, derived from preceding grants and conveyances shall be saved! Had this been told, their charge was answered. That which had not been granted was the property of the king. He might do with it as he pleased; erect it into a separate colony, or annex it to any colony already established. So far then no injury was done.

"But this act has *abolished the free system* of English laws, and established an *arbitrary government*. That could not be *abolished* which had never been *established*. The truth is this. Soon after the conquest of Canada, temporary provisions were made, by a proclamation of the king, for the government of Canada. These provisions were in many cases found inapplicable to the state and circumstances of the province. They were therefore repealed; and this act was passed *re-granting* to the Canadians the free exercise, unchecked by any civil disqualifications, of the religion in which they had been educated; *re-establishing* the civil laws, by which, prior to their conquest, their persons and their properties had been protected and ordered. Do the Canadians complain of this alteration? No. It was made in consequence of their petition.

"To *disobey the mandates* of New-England, and to *listen to the humble petitions* of Canada, are equally crimes in his majesty. It is a crime to make the minutest change in the constitution of the revolted provinces; and it is a crime of the same nature not to over-

overturn the whole constitution of a dutiful province. Not to deviate from the spirit of a charter, and to observe the spirit of a treaty of peace, are both acts of usurpation. To check innovations at Boston, and to respect the customs, and prejudices, and habits of thinking in Canada, are acts of the same tyranny.

Art. XXI. "For taking away our charters; abolishing our most valuable laws; and altering fundamentally the forms of our government."—The author remarks in regard to this article, that were the allegation really true, it would be an object of praise, rather than of censure. That the alterations made in the form of the government of Massachusetts Bay, go not deep enough into the foundations. That, supposing charters to be as sacred as treaties of peace, this charter was rightfully forfeited. But, in fact, that charters were never considered in so high a light; but have been frequently changed by the king alone: and that all charters under which the colonies *now* claim, are acts of the king *repealing* former charters. In proof of these assertions the author produces sufficient evidence from the history of the colonies.

Art. XXII. "For suspending our own legislatures and declaring themselves invested with power to legislate for us, in all cases whatsoever." In our author's observations on this article, he shews that it is a composition of manifest artifice and deceit; blending together two distinct acts, and representing them as one general law intended to operate in all the colonies.

Art. XXIII. "He has abdicated government here, by declaring us out of his protection, and waging war against us."—The substance of the remarks on this ridiculous article is, that acts of supreme authority are here given as proofs of abdication of government. That the Americans are no more out of his majesty's protection than *outlaws*, not released from allegiance. That they may re-enter under the protection of the king. And that war is no more waged against *them*, than by the sheriff, at the head of the *posse comitatus*, against *rioters*.

Art. XXIV. "He has plundered our seas; ravaged our coasts; burnt our towns, and destroyed the lives of our people."—The answer to the preceding article may serve as a reply to this.

Art. XXV. "He is at this time transporting large armies of foreign mercenaries to complete the works of death, desolation, and tyranny, already begun with circumstances of cruelty and perfidy, scarcely paralleled in the most barbarous ages; and totally unworthy the head of a civilized nation."—For the answer to these allegations, as being of considerable length, we must refer our readers to the work, where they will find them sufficiently refuted.

Art. XXVI. "He has constrained our fellow citizens, taken captive on the high-seas, to bear arms against their country, to become the executioners of their friends and brethren, or to fall themselves by their hands."—The alleviation of punishment, our author observes, is in this article urged as a proof of tyranny; and what is here reprobated as an act of severity in his majesty against rebels, is inflicted by the congress on men allowed to be innocent.

Art. XXVII. "He has excited domestic insurrections among us; and has endeavoured to bring on the inhabitants of our frontiers the merciless Indian savages, whose known rule of warfare is an undistinguished destruction of all ages, sexes and conditions."—It appears from the examination of this paragraph, that the exciting *domestic insurrections* can have no other meaning than the offering *freedom* to *slaves*; and with respect to the engaging of Indians, which was certainly a very justifiable measure on the side of government, it is incontestible that the authors of the Declaration were the first who had recourse to that policy.

Art. XXVIII. "In every stage of these oppressions we have petitioned for redress in the most humble terms; our repeated petitions have been answered only by repeated injury."—This allegation is so palpably repugnant to truth, as hardly to deserve a serious answer. It is however fully refuted by the author of the reply, with his usual precision and force of argument.

Thus far the writer has prosecuted the discussion of what the authors of the Declaration have submitted to the public as *facts*. He next presents us with a short review of the *maxims and theory of government*, exhibited in that wild effusion of political fanaticism. But we have already so much exceeded the limits allotted to a pamphlet, that we shall not pursue the subject any farther. From the penetration which is every where discovered in the Answer, a just opinion may readily be formed of the subsequent part of the analysis. To the approbation occasionally expressed of the author's arguments, in the course of our review, we have only to add in general, that he has, with great acuteness and much pains, unravelled the studied confusion in which the American demagogues have endeavoured to involve both the principles and progress of the contest; and that he has exposed the absurdity, detected the artifice, and refuted the falsehood, of a Declaration which teems with the most impudent and injurious assertions, that ever were invented to impose upon the credulity of mankind.

An Account of the Life of George Berkeley, D. D. late Bishop of Cloyne, in Ireland. With Notes containing Strictures upon his Works. 8vo. 2s. Murray.

WHEN men have distinguished themselves, in their respective generations, by their patriotic virtues, their illustrious actions, their useful inventions, or their excellent writings, their names ought to be transmitted to posterity with honour and applause. This posthumous approbation, this *consentiens laus bonorum*, as Tully calls it, this *incorrupta vox bene judicantium**, in future ages, is a tribute due to their merit, and an incitement to others in the pursuit of glory. On these accounts, biography is a most useful and instructive species of history.

Lord Bacon regrets, that the lives of eminent men are not more frequently written: for, adds he, ‘ though kings, princes, and great personages be few, yet there are many other excellent men, who deserve better than vague reports, and barren eulogies.’ As this is unquestionably just, it is also to be wished, that their lives were written in the course of a few years after their decease, while it is easy to trace every doubtful circumstance, and every anecdote to its real source, and discover truth from falsehood.

The work before us is not an elaborate performance; but, as far as we know, contains an authentic account of every memorable incident in the life of bishop Berkeley.—We shall endeavour to give our readers the substance of it in a more compendious form, with some occasional remarks.

Dr. George Berkeley, the subject of these memoirs, was the son of Mr. William Berkeley of Thomastown, in the county of Kilkenny. He was born at Kilcrin, near Thomastown, Mar. 12, 1684; and at the age of fifteen was sent to Trinity College, Dublin. In 1707 he was chosen fellow of that college; and the same year published a small tract, intitled *Arithmetica absque Algebra aut Euclide demonstrata*. This was a promising specimen of his literary abilities, and his early taste for the mathematics.

In 1709 he published his *Theory of Vision*. This work, as Dr. Reid assures us, was the first attempt, that ever was made to distinguish the immediate and natural objects of sight from the conclusions, which, from our infancy, we have been accustomed to draw from them. A distinction, says that learned writer, from which the nature of vision has received great light, and by which many phenomena in optics, before looked

* Tuscul. Quæst, lib. iii. § 3.

upon as unaccountable, have been clearly and distinctly resolved. The boundary is here traced out between the ideas of sight and touch, and it is shewn demonstrably, that though habit has so connected these two classes of ideas in our minds, that they are called by the same names, and are not, without a strong effort of attention, to be separated from each other, yet originally they have no such connection; insomuch that a person born blind, and suddenly made to see, would at first be utterly unable to tell how any object, that affected his sight, would affect his touch; and particularly would not from sight receive any idea of distance or external space, but would imagine, that all the objects he sees, are in his eye, or rather in his mind. See *Phil. Trans.* N^o. 402.

In 1710, Mr. Berkeley published his *Principles of human Knowledge*. The object of this tract, and likewise of the Dialogues between Hylas and Philonous, is to prove, that the commonly received notion of the existence of matter is false, and inconsistent with itself; that those things, which are called sensible material objects, are not external to the mind, but exist in it, and are nothing more than impressions made upon our minds by the immediate act of God, according to certain rules, termed laws of nature, from which, in the ordinary course of his government, he never deviates; that the steady adherence of the supreme Spirit to these rules is what constitutes the reality of things to his creatures, and so effectually distinguishes the ideas perceived by sense, from such as are the work of the mind itself, or of dreams, that there is no more danger of confounding them together, on this hypothesis, than on the common supposition of matter.

The not attending to this distinction, which is repeatedly inculcated by the author, has led many to suppose, that he rejected the testimony of his senses; when, in fact, the dispute is not about the reality of our *sensations*, of which he was fully convinced, but concerning the *causes* of those sensations; whether they are excited by the operation of inactive material beings without us, or by an infinite and almighty Spirit.

Berkeley thinks it a contradiction to say, that inert, unthinking matter can be the cause of ideas; for causality supposes action. The author of his *Life* replies, 'that the whole is an argument *ab ignorantia*, grounded on our inability of shewing the manner by which body operates on spirit; an inability however, which cannot take away that, of whose existence we have otherwise good reason to be satisfied. This good reason, he tells us, is the very same that Dr. Reid first pointed out, the constitution of nature, or instinct, which compels us to believe the existence of a number of beings

with

without us, both animate and inanimate, with as strong and invincible a faith, as we believe the existence of ourselves, and our own sensations.

That Berkeley's hypothesis is founded on our ignorance of the connection between matter and spirit we readily allow. But, on the other hand, we cannot admit, that an appeal to *instinct* is sufficient to satisfy a philosophical enquirer. Under that idea we may embrace a number of absurdities and vulgar errors.

The sum of the proof, which his adversaries alledge in defence of their opinion is this negative one, that, as we have sensations in our minds, excited independently on the operations of our wills, the cause, which excites them, must be exterior to the mind: *therefore* matter, to be the cause of them, *must exist*.—This argument is evidently inconclusive; since it must be acknowledged, that our sensations may be excited, as Berkeley supposes, by the Deity.

It is objected, that we cannot admit his opinion, without accusing God of deceiving us. But to this objection it may be replied, that the same argument would militate with equal force against the Copernican system.

Though this hypothesis is certainly nothing more than the whimsical conceit of a learned metaphysician, yet it is not so absurd, nor the author such a wronghead*, as some may pretend. The existence of bodies is by very sober reasoners thought to be incapable of being demonstrated. We do not immediately recollect, that any answer of consequence has been attempted; except by Baxter, in his Enquiry into the Nature of the human Soul. Whiston tells us, that he recommended the task of confuting it to Dr. Clarke; acknowledging, that he was unequal to it himself.

In 1712 Mr. Berkeley printed the substance of three discourses, delivered in the college chapel, on the doctrine of passive obedience, occasioned by the principles inculcated in Mr. Locke's Treatises on Government.

In 1713 he came to England, and published in London a farther defence of his celebrated system of immaterialism, in Three Dialogues between Hylas and Philonous. Acuteness of genius, and a beautiful imagination, were so conspicuous in his writings, that his reputation was now established, and his company was courted. About this time sir Richard Steele, for whom he wrote several papers in the Guardian, introduced him to Mr. Pope; and Dr. Swift to the earl of Peterborough, and other valuable acquaintance.

* Vide Letters of Clement XIV. Let. 6,

In November the same year, he attended lord Peterborough, who was appointed ambassador to the king of Sicily and the other Italian states, in quality of chaplain and secretary. In August 1714, he returned with his lordship to England; and his hopes of preferment, through this channel, expiring with the fall of queen Anne's ministry, he some time afterwards embraced an advantageous offer made him by Dr. St. George Ashe, bishop of Clogher, of accompanying his son, Mr. Ashe, on a tour through Europe.

At Paris Mr. Berkeley paid his respects to the celebrated father Malebranche. He found this illustrious metaphysician in his cell, cooking in a small pipkin a medicine for a disorder, with which he was then troubled, an inflammation on the lungs. The conversation naturally turned on our author's system, of which the other had received some knowledge from a translation just published. But the issue of this debate proved tragical to poor Malebranche. In the heat of disputation he raised his voice so high, and gave way so freely to the natural impetuosity of a man of parts and a Frenchman, that he brought on himself a violent increase of his disorder, which carried him off a few days after.—Oct. 13, 1715.

In this second excursion Mr. Berkeley employed upwards of four years; and besides all those places, which are usually visited by strangers in what is called the grand tour, he travelled over Calabria, Sicily, and Apulia, from whence he wrote an entertaining account of the tarantula to Dr. Friend. Sicily engaged his attention to it so strongly, that he had compiled very considerable materials for its natural history: but by an unfortunate accident they were lost in the passage to Naples. What an injury the literary world has sustained by this disaster, may in part be collected from the specimen he has left of his talent for lively description in his letter to Mr. Pope, concerning the island of Inarime, now Ischia, in the bay of Naples, dated Naples, Oct. 22, 1717; and in another from the same city to Dr. Arbuthnot, giving an account of an eruption of mount Vesuvius, which he had the opportunity of examining very minutely*.

On his way homewards he drew up at Lyons a curious tract *de Motu*, which he sent to the Royal Academy of Sciences at Paris, the subject having been proposed by that assembly. The principal positions in this treatise are, 1. That neither the beginning nor the communication of motion can justly be ascribed to body, which is wholly incapable of action; but must be referred to spirit only, and ultimately to the supreme

* Pope's Works, Vol. viii. Let. vii. p. 289. Phil. Trans. N^o. 354.

Spirit, the fountain of all things; 2. That pure space is a mere figment of philosophers; space not being *absolute*, but *relative* to the bodies comprehended in it: so that, if these were annihilated, space would perish along with them, like all other relations, which cannot be conceived to exist without their correlatives.—This tract was printed at London 1721.

In the same year he published an *Essay towards preventing the Ruin of Great Britain*, occasioned by the fatal South-Sea scheme in 1720.

Upon his return from his travels, Mr. Pope introduced him to lord Burlington, who conceived a high esteem for him, on account of his taste and skill in architecture, which he had made his particular study, while in Italy. By this nobleman he was recommended to the duke of Grafton, lord lieutenant of Ireland, who carried him over to Dublin, as one of his chaplains. On this occasion, he took the degree of bachelor and doctor in divinity.

In 1721, he received a very considerable increase in his fortune by a very unexpected event. Mrs. Esther Vanhomrigh, the celebrated Vanessa of Swift, was so enraged at the dean's infidelity, that she altered her intentions of making him her heir, and left the whole of her fortune, amounting to near 8000*l.* to be divided equally between two gentlemen, whom she named her executors, Mr. Marshal, a lawyer, afterwards Mr. justice Marshal, and Dr. Berkeley. In consequence of this trust, the letters between Cadenus and Vanessa fell into the hands of Dr. Berkeley, who had so much tenderness for his friend's reputation, as to commit them to the flames.

In 1726 Dr. Berkeley resigned his fellowship, being promoted by the duke of Grafton to the deanry of Derry, worth 1100*l.* a year. In the interval between his return from abroad and this promotion, his mind had been employed in contriving a scheme for converting the savage Americans to Christianity, by a college to be erected in the island of Berinuda. He published a proposal for this purpose in 1725, and offered to resign his own opulent preferment, and to dedicate the remainder of his life to the instruction of the youth in America, on the moderate subsistence of 100*l.* yearly. Such was the force of this example, that three junior fellows of Trinity college, Dublin, Mess. Thomson, Rogers, and King, consented to take their fortunes with the author of the project, and to exchange all their prospects at home for a settlement of 40*l.* a year in the Atlantic ocean.

Having with great industry acquired an accurate knowledge of the value of certain lands in the island of St. Christopher's, yielded by France to Great Britain at the treaty of

Utrecht, which was then to be sold for the public use, he undertook to raise from them a much greater sum than was expected; and proposed, that a part of the purchase money should be applied to the erecting of his college. His proposal was carried to the king, who commanded sir Robert Walpole to conduct it through the house of commons. The vote was accordingly passed, the sum of 10,000l. was promised by the minister, and several private subscriptions were immediately raised for promoting this public-spirited undertaking. In the mean time the dean entered into a marriage with Anne, daughter of the right hon. John Folter, esq. speaker of the Irish house of commons. This engagement, however, was so far from obstructing his design, that he set sail in September following, carrying along with him his lady, a miss Hancock, two gentlemen of fortune, Mess. James and Dalton, a pretty large sum of money of his own property, and a collection of books for the intended library. He directed his course to Rhode island, which lay nearest to Bermuda, with a view of purchasing lands on the continent as estates for the support of his college.

When estates had been agreed for, it was fully expected, that the public money would be immediately paid. But the minister had never heartily embraced the project, and parliamentary interest had by this time interposed, in order to divert the grant into another channel. The sale of the lands in St. Christopher's, it was found, would produce 90,000l. Of this sum 80,000l. was destined to pay the marriage portion of the princess royal, on her nuptials with the prince of Orange. The remainder general Oglethorpe had interest enough in parliament to obtain for settling his new colony of Georgia.

Repeated applications having been made to the minister without success, the dean, after he had spent much of his private fortune, and above seven years of the prime of his life, was forced to abandon his scheme. He therefore distributed what books he had carried with him, among the clergy of Rhode island, and immediately after his arrival in London returned all the private subscriptions, which he had received for the support of his undertaking.

In 1732, he preached before the society for the Propagation of the Gospel in foreign Parts; and the same year published his *Minute Philosopher*; in which he pursues the freethinker through the various characters of atheist, libertine, enthusiast, scorner, critic, metaphysician, fatalist, and sceptic. This masterly performance is written in a series of dialogues on the model of Plato.

After

After his return from America, queen Caroline often commanded his attendance, to discourse with him on what he had observed worthy of notice in that country. His agreeable and instructive conversation engaged that discerning princess so much in his favour, that he was preferred to the bishopric of Cloyne in 1734.

About this time the bishop was engaged in a controversy with the mathematicians. The occasion was this: Mr. Addison had given him an account of their common friend, Dr. Garth's behaviour in his last illness, which was equally unpleasing to both these excellent advocates for revealed religion. For when Mr. Addison went to see the doctor, and began to talk with him seriously about preparing for his approaching dissolution, the other made answer, "Surely, Addison, I have good reason not to believe those trifles, since my friend Dr. Halley, who has dealt so much in demonstration, has assured me, that the doctrines of Christianity are incomprehensible, and the religion itself an imposture." The bishop therefore took arms against this dealer in demonstration, and addressed *the Analyst* to him, with a view of shewing, that mysteries in faith were unjustly objected to by mathematicians, who admitted much greater mysteries, and even falsehoods in science, of which he endeavoured to prove, that the doctrine of fluxions furnished an eminent example. His chief objections may be comprised under these two heads, 1. That the object (*viz.* fluxions) is inconceivable; 2. That the arguments, brought to prove the truth of the fundamental proposition, are fallacious and inconclusive. This publication produced a number of warm answers, to which the bishop replied once or twice.

From this controversy he turned his thoughts to subjects of more apparent utility. His *Queries* relative to the trade and prosperity of Ireland, 1735, his *Discourse addressed to the Magistrates*, 1736, and his *Maxims concerning Patriotism*, 1750, are incontestible proofs of his zeal for the service of true religion and his country.

In 1744 he published a celebrated treatise, entitled *Siris, or a Chain of philosophical Reflections and Enquiries concerning the Virtues of Tar Water*. The author has been heard to declare, that this work cost him more time and pains than any other he had ever been engaged in: a circumstance, which will not appear surprising to such as shall give themselves the trouble of considering the extensive erudition, which is there displayed. It is indeed a chain, which like that of the poet extends from earth to heaven, conducting the reader by an almost imperceptible gradation from the phenomena of tar water,

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through the depths of the ancient philosophy, to the sublimest mysteries of the Christian religion.

In 1745, during the Scotch rebellion, his lordship addressed a Letter to the Roman Catholics of his diocese; and in 1749 another to the clergy of that persuasion in Ireland, under the title of a *Word to the Wise*, which was written with so much candour, moderation, and good sense, that it met with the highest approbation from all parties.

In the same year lord Chesterfield, without any application, wrote to inform him, that the see of Clogher then vacant, was at his service. But though the value of Clogher was double that of Cloyne, the bishop declined his lordship's offer.

In 1752 he published a sequel to his *Siris*, entitled *Farther Thoughts on Tar Water*, having more particularly enquired into the virtues of this medicine, and experienced its good effects in the removal of a nervous cholic, brought on him by his sedentary course of life. This was his last performance for the press.

Hitherto he had distinguished himself by pastoral vigilance and constant residence; and at once endeared himself to his people, and promoted industry, by purchasing nothing for himself or family from any remoter place, which was manufactured, however imperfectly, in his own little town. When Plutarch was asked, why he resided in his native city so obscure and little, "I stay, said he, lest it should grow less." Such was bishop Berkeley's adherence to his Cloyne.

In July 1752 he removed with his lady and family to Oxford, in order to superintend the education of his son, the present Dr. Berkeley, prebendary of Canterbury, then newly admitted a student at Christ Church. He had taken a resolution to spend the remainder of his days in that city, among books and scholars. But as no body could be more sensible than his lordship of the impropriety of a bishop's non-residence, he previously endeavoured to exchange his preferment in Ireland for a canonry of Christ Church. Failing in this application, he wrote to the secretary of state, requesting that he might be permitted to resign his bishoprick, worth at that time at least 1400l. per annum. This uncommon petition excited his majesty's curiosity to enquire, who was the extraordinary man that preferred it. Being told, that it was Dr. Berkeley, he insisted on his holding his bishoprick, and gave him leave to reside where he pleased.

At Oxford he lived highly respected by the learned members of that great university, till Sunday, Jan. 14, 1753. As he was in the midst of his family, listening to a sermon

mon of Dr. Sherlock's, which his lady was reading, he was seized with what was termed a palsy in the heart, and instantly expired. The accident was so sudden and unexpected, that his body was cold before it was discovered, as the bishop lay on a couch, and seemed to be asleep, till his daughter, on presenting him with a dish of tea, perceived his insensibility.

His remains were interred at Christ Church, Oxford, where there is an elegant marble monument erected to his memory by his lady, who is still living, and by whom he had three sons and one daughter.

His person was handsome, his countenance full of meaning and benignity, and his constitution robust, till impaired by a sedentary life.

His moral character is delineated by one stroke of Mr. Pope's inimitable pen.

Manners with candor are to Benson giv'n,
To Berkeley, ev'ry virtue under heav'n.

Epil. to Sat. v. 72.

Dr. Berkeley, besides his excellent writings, left a monument of his skill in architecture in some very elegant drawings, which are now in the possession of his grand-daughter, Mrs. Ewing, widow of Mr. Thomas Ewing, an ingenious and spirited bookseller of Dublin, lately deceased, whose death has deprived the public of what has long been much wanted, a complete edition of bishop Berkeley's works in quarto.

A Tour in Scotland. MDCCLXXII. Part II. 4to. 1l. 11s. 6d. in boards. White. (Concluded from p. 257.)

PROceeding from Dumfermline, a *tumulus* is pointed out to the traveller at a distance, planted with trees, called the penitent-mound, from a vulgar notion, that it was formed by sacks full of sand, brought there from distant places by the frail, by way of penance for their sins. At Clune our author is struck with the magnificence of the prospect, extending west to Benlomond, and east to Old Cambus; a view of the whole Forth, and the two castles of Edinburgh and Stirling.

Descending towards the shore, Mr. Pennant reaches the Lime-kilns, belonging to the earl of Elgin, the greatest perhaps in the universe; placed amidst inexhaustible beds of lime-stones, and near immense seams of coal. The kilns range in a straight line, having their openings beneath a covered

vered way, formed, by arches and pillars in front, into a magnificent colonnade. They lie beneath the strata of limestone, which, when broken, is conveyed into them by variety of railroads; and for shipping the lime, either burnt or crude, is a convenient pier. A hundred and twenty men are constantly employed, and a little town built for them.

Opposite to Lime-kilns, on a rock projecting into the Forth, is Blackness-castle, once a place of great importance in preserving a communication between Edinburgh and Sterling; now a shelter to a few invalids. It is a large pile, defended by towers, both square and round.

After a ride of four miles, the traveller enters a portion of Perthshire, which just touches on the Firth, at Culrofs. This small town is remarkable for a magnificent house, built about the year 1590, by Edward lord Kinlofs, better known in England, as our author observes, by the name of lord Bruce, slain in the noted duel between him and sir Edward Sackville. Here are still to be seen some remains of the Cistercian abbey, founded by Malcolm, earl of Fife, in 1217.

Continuing his journey, in sight of vast plantations, the traveller reaches the little mire of Clackmannan. The town of the same name is pleasantly seated on a hill, long the residence of the chief of the Bruces, sloping on every side; and on the summit is the castle, commanding a noble view. The large square tower is called after the name of Robert Bruce; whose great sword and casque are still preserved here. The hill is prettily wooded, and, with the tower, forms a picturesque object.

Crossing the small river Devan, after a mile's ride Mr. Pennant arrives at the town of Alloa, remarkable for its coal trade. Scotland, he informs us, exports annually above a hundred and eighteen thousand tons of coal, out of which, Alloa alone is said to send forty thousand. The town and parish are very populous, containing about five thousand souls.

The Ochil hills, Mr. Pennant informs us, begin beyond Alloa to approach very near to the Forth, between which is a narrow arable tract, well cultivated and adorned with woods. In these hills was found, in the beginning of this century, a large body of native silver, beautifully ramified; and of late years, some cobalt ore.

After visiting the ruins of the ancient abbey of Cambuskenneth, the traveller proceeds to Sterling. This town contains about four thousand inhabitants; has a manufacture of tartanes and shalloons, and employs about thirty looms in that of carpets. The castle is of great strength, impending over a steep

steep precipice. Within side stands the palace, built by James V. a prince acknowledged to have had a great taste for the fine arts. This pile is large, of a square form, ornamented on three sides with pillars, resting on grotesque figures, jutting from the wall. On the top of each pillar is a fanciful statue. Two rooms, called the queen's and the nursery, are large; the roofs of wood, divided into squares and other forms, well carved. The parliament house is a vast room, a hundred and twenty feet long, with a timbered roof.

From the top of the castle, says our author, is by far the finest view in Scotland: to the east is a vast plain, rich in corn, adorned with woods, and watered with the river Forth, whose meanders are, before it reaches the sea, so frequent and so large, as to form a multitude of most beautiful peninsulas; for in many parts the windings approximate so close as to leave only a little isthmus of a few yards. In this plain is an old abbey, a view of Alloa, Clackmannan, Falkirk, the firth of Forth, and the country as far as Edinburgh; on the north, the Ochil hills, and the moor where the battle of Dumblain was fought; to the west, the strath of Menteith, as fertile as the eastern plain, and terminated by the highland mountains; among which the summit of Ben-lomond is very conspicuous.

Among the houses of the nobility, the most superb was that of the earl of Mar, built by the regent; the front ornamented with the arms of the family, and much sculpture. It is said to have been built from the ruins of Cambus Kenneth, and that being reproached with the sacrilege, directed these words, yet extant, to be put over the gate:

ESSPY. SPEIK. FURTH. I CAIR. NOTHT.

CONSIDR. WEIL. I CAIR. NOTHT.

Near the castle are Edmonston's walks, cut through a little wood, on the vast steeps. Nature hath strangely buttressed it up with stones of immense size, wedged between each other with more of the same kind piled on their tops. Beneath, on the flat, are to be seen the vestiges of the gardens belonging to the palace, called the King's knot; where, according to the taste of the times, the flowers had been disposed in beds and curious knots, at this time very easily to be traced in the fantastic form of the turf.

Above these walks is the Ladies hill; for here sat the fair to see their faithful knights exert their vigor and address in the tilts and tournaments, performed in a hollow between this spot and the castle.

Proceeding afterwards through the small town of St. Ninian and the village of Bannockbourne, the traveller ascends a hill, and passes by the reliques of Torwood, noted for having once been the refuge of the famous Wallace. Some remains

of

of an oak, beneath which the hero is said to have reposed, is still pointed out with great veneration. Over this place passes the Roman military road, which our author had before traced to the north of Dupplin.

Mr. Pennant continues his journey to Falkirk, leaving, in a valley on the left, the two mounts, called Dunipace, conjectured by some to have been exploratory mounts, and by others supposed to be sepulchral. To the east of these, stood the celebrated antiquity, known by the name of Arthur's oven.

Falkirk, we are told, is a large ill built town, supported by the great fairs for black cattle from the Highlands; it being computed that twenty-four thousand head are annually sold here. At a small distance from the town are some large remains of Antoninus's Wall, erected by Lollius Urbicus, governor of Britain during the reign of Antoninus Pius. The wall was of turf, which in this place was forty feet broad, and the ditch thirteen feet deep.

Our author next reaches the town of Linlithgow, containing between three and four thousand inhabitants. It carries on a considerable trade in dressing of white leather, which is sent abroad to be manufactured. It also employs many hands in dressing of flax, and in wool-combing. The castle is a magnificent edifice, of a square form, finely seated above a lake. The inside is much embellished with sculpture: over an inner gate are niches, in former times holding the statues of a pope and a cardinal; said to be erected by James V. in compliment to his holiness for a present of a consecrated sword and helmet. On an outward gate, detached from the building, are the four orders of knighthood, which his majesty bore, the garter, thistle, holy-ghost, and golden-fleece. In one of the more ancient parts of this castle, is a room ninety-five feet long, thirty feet six inches wide, and thirty-three high.

We insert the following passage from our author's narrative, though the anecdotes appear too improbable to deserve much credit.

‘ I heard here of a letter from James VI. to borrow some silver spoons for a feast; and of another to borrow from the earl of Mar a pair of silk stockings, to appear in before the English ambassador. Though I cannot authenticate these relations of the simplicity of the times; yet I have a curious letter from the same monarch, to borrow a thousand marks, or 54l. 3s. 4d. in the year 1589, being that of his wedding, telling the lender (John Boiswell, of Balmonto) “ Ye will rather hurt your self veiry fair, than see the dishonour of your prince and native coun-

country with the povertie of baith set downe before the face of strangers."

The next stage of our author's journey is Edinburgh, at which he arrives by the way of Kirkliston, and Coltbridge. He now takes notice of some remarkable places which had escaped his observation in the former Tour, or at least merited more particular observation than he had bestowed upon them. But, passing over his account of the city, we shall follow him to Hawthornden, the seat of the historian and poet, Drummond, about six or seven miles south of Edinburgh.

The house and a ruined castle are placed on the brink of a vast precipice of free-stone, with the North-Esk running in a deep den beneath. In the house are preserved the portraits of the poet and his father. In the front of the rock, just beneath the house, is cut a flight of twenty-seven steps, the descent of which is interrupted by a gap, passable by a bridge of boards. These steps lead to caves, which have been cut with vast labour out of the rock. There are several apartments, but the largest faces the door, and is ninety one feet long; the beginning is twelve feet wide, the rest only five feet eight; the height six. In a recess of the broader part is a well, some fathoms deep. Above is cut a funnel, which pierces the roof.

These curious hollows have been supposed by some to have been the work of the Picts; but Mr. Pennant conjectures with greater probability, that they were designed as an asylum in troublesome times for neighbouring inhabitants, in the same manner as Wetberell cells were for the monks of the abbey. Our author remarks, that the brave Alexander Ramsay, in 1341, made these caves his residence. The caves alone, we are told, attract the attention of strangers; but it is Mr. Pennant's opinion, that the solemn and picturesque walks cut along the summits, sides, and bottoms of this beautiful den, are much more deserving of admiration. The vast mural fence, says he, formed by the red precipices, the mixture of trees, the grotesque figure of many of the rocks, and the smooth sides of the Pentland hills, appearing above this wild scenery, are more striking objects to the contemplative mind.

The traveller informs us, that after crossing the river, and clambering up a steep hill, there may be discovered, on the summit a work of art, not less admirable than those of nature, mentioned in the account of Hawthornden. This is the chapel of Roslyn; a curious piece of Gothic architecture, founded in 1446, by William St. Clare, prince of Orkney.

The

The outside is ornamented with a multitude of pinnacles, and variety of ludicrous sculpture. The inside is sixty-nine feet long, the breadth thirty-four, supported by two rows of clustered pillars, between seven and eight feet high, with an aisle on each side. The arches are obtusely Gothic, and continued across the side-aisles; but the centre of the church forms one arch, elegantly divided into compartments, and finely sculptured. The capitals of the pillars are enriched with foliage, and variety of figures; and amidst a heavenly concert, appears a cherubim blowing the ancient highland bagpipe. In short, says Mr. Pennant, in all its parts is a profusion so exquisite, as seems even to have affected with respect the barbarism of Knox's manual reformers, so as to induce them to spare this beautiful and venerable pile.

In a deep den far beneath, amidst wooded eminencies, are the ruins of the castle, fixed on a peninsulated rock, accessible by a bridge of stupendous height. This had been the seat of the great family of Sinclair. 'Of this house, our author observes, was Oliver, favourite of James V. and the innocent cause of the loss of the battle of Solway Moss, by the hatred of the nobility to his preferred command. He lived in poverty to give a fine lesson of the uncertainty of prosperity to the pride of the worthless Arran, minion to James VI. appearing before the insolent favourite, in the garb of adversity, repeating only these words, *I am Oliver Sinclair.*'

On returning to the city the inquisitive traveller visited Mr. Braidwood's academy of dumb and deaf; of which we have the following account.

'This extraordinary professor had under his care a number of young persons, who had received the Promethean heat, the divine *inflatus*; but from the unhappy construction of their organs, were ('till they had received his instructions) denied the power of utterance. Every idea was locked up, or appeared but in their eyes, or at their fingers end, till their master instructed them in arts unknown to us, who have the faculty of hearing. Apprehension reaches us by the grosser sense. They see our words, and our uttered thoughts become to them visible. Our ideas expressed in speech strike their ears in vain: their eyes receive them as they part from our lips. They conceive by intuition, and speak by imitation. Mr. Braidwood first teaches them the letters and their powers; and the ideas of words written, beginning with the most simple. The art of speaking is taken from the motion of his lips: his words being uttered slowly and distinctly. Their answers are slow, and somewhat harsh.

'When I entered the room, and found myself surrounded with numbers of human forms so oddly circumstanced, I felt a sort

sort of anxiety, such as I might be supposed to feel had I been environed by another order of beings. I was soon relieved, by being introduced to a most angelic young creature, of about the age of thirteen. She honoured me with her new-acquired conversation; but I may truly say, that I could scarcely bear the power of her piercing eyes: she looked me through and through. She soon satisfied me that she was an apt scholar. She readily apprehended all I said, and returned me answers with the utmost facility. She read; she wrote well. Her reading was not by rote. She could clothe the same thoughts in a new set of words, and never vary from the original sense. I have forgot the book she took up, or the sentences she made a new version of; but the effect was as follows:

Original passage.	Version.
‘ Lord Bacon has divided the whole of human knowledge into history, poetry, and philosophy, which are referred to the three powers of the mind, memory, imagination, and reason.’	‘ A nobleman has parted the total or all of man’s study, or understanding, into an account of the life, manners, religion and customs of any people or country, verse or metre, moral or natural knowledge, which are pointed to the three faculties of the soul or spirit; the faculty of remembering what is past, thought or conception, and right judgment.’

‘ I left Mr. Braidwood and his pupils with the satisfaction which must result from a reflection on the utility of his art, and the merit of his labours: who after receiving under his care a being that seemed to be merely endowed with a human form, could produce the *divina particula pura*, latent, and, but for his skill, condemned to be ever latent in it; and who could restore a child to its glad parents with a capacity of exerting its rational powers, by expressive sounds of duty, love, and affection.’

Leaving Edinburgh, Mr. Pennant leads us by the ancient castles of Crichton, Borthwick, and Lauder, to the shire of Roxburgh, where we are entertained with a description of the beautiful abbey of Melros, which was founded in 1136, by David I. and afterwards with that of the castle of Roxburgh, seated on a vast and lofty knoll, of an oblong form, suddenly rising out of the plain, near the junction of the Tweed and the Teviot. From hence the traveller proceeds to Kelso, a few miles beyond which he enters the county of Northumberland. At this period, properly, the Tour in Scotland terminates; though Mr. Pennant continues the narrative to his arrival at Chester.

An Appendix is added to this volume; Number I. presents us with an Account of the Constitution of the Church of Scotland. II. relates the Proceedings of the same Church against a Minister in case of a *Fama Clamosa*. III. contains some Galic Proverbs, and poetical Translations. IV. is an Account of the Fasting Woman of Ross-shire. V. of the parallel roads in Glen-roy. VI. Of the Slough Dogs. VII. a Letter concerning Sheep-farms, &c. VIII. of the Antiquities found at the Station at Burrens. IX. a List of Barons summoned to the Siege of Caerlaveroc. X. of the Gold Mines of Scotland. XI. a Dissertation on the Government of the People in the Western Isles, with an Account of the Gruagich, or consecrated Stones. XII. of the Number of Inhabitants in the Hebrides and the western Highlands. XIII. Copy of a Writ of Fire and Sword. XIV. of the Sivvens. XV. Repository of Ashes; Description of Craighall; Reeky Linn; of Antiquities in the neighbourhood of Perth. XVI. an abridged Account of the Effects of the Lightning, which broke on Melvil House, in Fifeshire, the seat of the Earl of Leven, on the 27th of October, 1733. XVII. Copy of King Malcolm's Charter to the Town of St. Andrew's. XVIII. Comparison of the Roman measures with those used at present in Scotland. XIX. List of Scotch Manufactures, which are exported; and where made, &c. XX. An Itinerary.

The volume is ornamented with many beautiful plates, which shew the laudable regard of this accurate traveller for gratifying the curiosity of the public.

Medical Observations and Inquiries. By a Society of Physicians in London. Vol. V. 8vo. 6s. boards. Cadell.

IT affords us great pleasure to behold the Society resume the continuation of this useful work, the preceding volumes of which were so well received by the public. We are told by the editors, in the preface, that about the time of their last publication, the species of rhubarb now generally known by the name of *rheum palmatum*, and which is thought by many to be the true rhubarb of the shops, became a subject of general conversation among the faculty, as not unlikely to prove an acquisition of importance to medicine, and also an article of agriculture and commerce. This kind of rhubarb has since been raised in various parts of Britain; and specimens have been produced, much resembling the best that is usually imported. The Society, we are informed, interested themselves pretty early in this affair, with a view to collect such

such evidence as might serve to ascertain the propriety of admitting it into general use, and likewise satisfy the public in respect to the expediency of promoting its culture. Though the reports hitherto made to this Society, be much in favour of the species of rhubarb above mentioned, yet they think it necessary to request the farther assistance of the faculty, to enable them fully to decide on its particular virtues.

The first article in this volume contains an account of the effects of electricity in the amaurosis, by Mr. Hey, surgeon at Leeds. The narrative consists of seven cases, in all which the method of cure proved successful, except in two patients; one of whom seems not to have regularly followed the prescriptions, and in the other the ventricles of the brain were distended with a limpid fluid, as afterwards appeared upon dissection.

We shall present our medical readers with the first of these valuable cases.

October 27, 1766, I was desired to visit Mrs. Walker, a middle aged lady, of a habit somewhat gross, whom I found affected with a complete amaurosis or gutta serena in each eye. She had first perceived her sight to be affected on the 18th, as she was reading; and the dimness had increased so fast, that upon the 21st she was totally blind. About six weeks before this disorder came on, she had fallen with her forehead against the base of a chest of drawers, and had made a wound in the integuments, which healed without much trouble. After the healing of the wound, she had complained of an odd sensation, which she described by saying "she felt as if blood was trickling down within the skull, opposite the wounded part." This continued till the amaurosis came on, and then ceased. She had no pain in her forehead after the wound was cicatrized, until the first attack of the blindness, which was accompanied with a little pain just above the orbits. Eight ounces of blood had been taken from her arm on the 19th, by Mr. Faber, her apothecary; and on the 21st the same quantity had been drawn by the advice of Dr. Hird, who was then consulted, and prescribed some nervous medicines, with the application of a blistering-plaster between the shoulders.

I examined her eyes along with Dr. Hird on the 27th: she had then not the least perception of light, but the pupils remained largely and equally dilated in all situations of the eyes. I proposed the use of the electrical machine, with the exhibition of mercurials in small doses. The doctor approved of this plan, and prescribed the following bolus, to be taken every night at bed-time:

℞ Calomel. pp.
Camphor. aa gr. iij.
Conser. Cynosb. q. s. probe misceant. et f. Bolus.

‘ The electrical machine was used twice a-day. Our patient was first set upon a stool with glass feet, and had sparks drawn from the eyes and parts surrounding the orbits, especially where the superciliary and infraorbital branches of the fifth pair of nerves spread themselves. After this operation had been continued about half an hour, she was made to receive for an equal time slight shocks through the affected parts, which were sometimes directed across the head, from one of the temples to the other, but chiefly from the superciliary and infraorbital foramina to the occiput.

‘ After using these means for a few days, her sight began to return; in a week’s time she could tell the number of persons in her room; in six or seven weeks she was able to read a letter that she received, and in less than three months was perfectly well.

‘ She first discovered the fire when her eyes were in such a situation, that the rays of light entered the pupil in an oblique direction, and in this imperfect state of her sight it had a blue appearance. She could discern objects in general with an oblique view before she could distinguish those placed exactly before her, whose rays fell upon the center of the retina.

‘ The bolus generally procured two or three stools in the day, and was continued till the 8th of November: her month began then to be affected, on which account it was omitted, and purgatives administered to suppress the ptialism, which soon went off. She rode out in a chaise every day during the first three weeks of this course.

‘ This lady assured me, a few weeks ago, that her sight was as strong now as it had been before her eyes were affected with the amaurosis.’

Most of the other cases were treated nearly in the same manner, generally with a smaller dose of the mercurial, and sometimes with the addition of Peruvian bark. Mr. Hey does not positively determine how far the mercurial course was of service, but he is inclined to ascribe the benefit received in these instances chiefly to electricity; as in two of the cases no medicines were used, yet the progress of amendment seemed to be as speedy in them as in the rest; and in two a degree of sight was obtained by the first application of electricity.

In the conclusion of the narrative Mr. Hey delivers it as his opinion, that where the amaurosis is not recent, very little benefit can accrue from the use of those remedies; and he informs us that he has never seen the least good done to any who had been afflicted with this disorder above two years, though he has tried electricity in several such cases. It appears however, from one instance, published as a sequel to these facts, that an amaurosis has been almost totally cured, after

after the disorder had continued three years, and been two years at a stand. In this case no means were applied, except electricity, and twice the use of moderate venæsection.

Number II. Remarks upon bilious Fevers and Inoculation, in an extract from a Letter by Dr. Rush of Philadelphia. A gentle puke of tartar emetic dissolved in water, with a few doses of Glauber or Epsom salts, if indicated, and the free use of Peruvian bark afterwards, are the means which he has found most successful in these fevers. He has seldom used blisters, and produces the authority of Dr. Johnson, a physician of eminence at Savannah in Georgia, who is well acquainted with the bilious fever in all its degrees, against the propriety of those applications. With respect to inoculation Dr. Rush informs us, that he never uses mercury as a preparative for the small pox, but relies on a vegetable diet, with a few doses of jalap, cremor tartari, or flower of sulphur; imagining that the glandular swellings, the loss of teeth in children, and the weak habit of body, which very often succeed the small-pox by inoculation in that part of America, are chiefly owing to the too free use of mercury.

III. and IV. Some Account of the Cortex Winteranus, or Magellanicus, with a botanical description by Dr. Solander, and some experiments by Dr. Morris.

V. Observations on the Use of Wort, in the Cure of the Scurvy at Sea; by Dr. Badenoch. These Observations confirm the experiments made by Dr. Macbride, and published by him in 1767.

VI. An Account of a singular Case, by Mr. Lucas, surgeon at Leeds, of a gentlewoman cured of a hæmoptoe, attended with nervous symptoms. During the last five months of her pregnancy she was bled about sixty times, and took near three hundred grains of opium.

VII. An Account of a fractured Skull, cured by mess. Carlos and Taswell, surgeons at Portsmouth.

VIII. An Account of two extraordinary Cases after Delivery, by Dr. Macbride. These cases were owing to a rupture of the blood-vessels bestowed on the vagina and parts which constitute the os externum; by which the blood had been accumulated in the interstices of the cellular membrane, and raised a great swelling of the labia and perinæum.

IX. An Account of an Asthma, occasioned by a tumour seated partly on the trachea and partly on the œsophagus; by Dr. Rush, of Philadelphia.

X. The Case of a retroverted Uterus; by Mr. James Hooper.

XI. An Account of a Retroversio Uteri ; by Mr. William Bird, surgeon at Chelmsford.

XII. An Account of the Efficacy of Hemlock, in schirrhous Cases and Ulcers ; by Dr. Douglas, of Kelso.

XIII. The Case of a large Tumour on the Head of an Infant ; by Mr. Loftie, surgeon at Canterbury.

XIV. Of a painful Affection of the Face ; by Dr. Fothergill. Of this affection, which is said to be peculiar to persons advanced in years, and to women more than men, we are favoured with the following account.

‘ From imperceptible beginnings, a pain attacks some part or other of the face, or the side of the head : sometimes about the orbit of the eye, sometimes the ossa malarum, sometimes the temporal bones, are the parts complained of. The pain comes suddenly, and is excruciating ; it lasts but a short time, perhaps a quarter or half a minute, and then goes off ; it returns at irregular intervals, sometimes in half an hour, sometimes there are two or three repetitions in a few minutes.

‘ The kind of pain is described differently by different persons, as may be reasonably expected ; but one sees enough to excite one’s compassion if present during the paroxysm.

‘ It returns full as often in the day as in the night. Eating will bring it on some persons. Talking, or the least motion of the muscles of the face affects others ; the gentlest touch of a hand or a handkerchief will sometimes bring on the pain, whilst a strong pressure on the part has no effect.

‘ It differs from the tooth-ach essentially in many respects. It affects some who, from age, have few or no teeth remaining. It most commonly seizes some part above the sockets of the teeth, yet the teeth are sometimes affected with an exquisite sensibility, upon endeavouring to chew even the softest substance. The lower jaw is seldom attacked with this disease.

‘ It differs likewise from that disorder which has obtained the name of an ague or rheumatism in the face, a disorder as painful as it is frequent. This, though it is often connected with some decay in the teeth and the nerves that are distributed to them, yet for the most part its exacerbations are regular in respect of time, like the fit of an ague ; and at night, as in the rheumatism.

‘ The tooth-ach, arising from a faulty tooth, does not often indeed afford much remission from pain, till either the inflammation is abated by some means, or the nerve is destroyed or rendered less sensible.

‘ But when to the usual cause of a tooth-ach this rheumatic disposition is conjoined, though the pains are never entirely off, yet the night is the time of their greatest severity. Besides, the season of the tooth-ach and this species of rheumatism is generally from the end of adolescence to the meridian of life or later.

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‘ The disease which is the subject of this essay is seldom observed till between forty and fifty, and through the later stages of life. Contrary to what happens in the preceding complaints, the affection I am treating of is most commonly severer in the day than in the night; sometimes, indeed, it is excited to an extreme degree of violence by the lightest touch of the bed-clothes, which can scarcely be avoided in turning, or any other motion in bed.’

Dr. Fothergill appears to entertain an opinion that a cancerous acrimony may be the basis of this, and some other stubborn complaints; and that much evil might probably be prevented by treating them early with the remedies suggested in consequence of this idea. These are, by opening a drain, by repeated small bleedings, by gentle cooling laxatives, the hemlock, a light diet, and the other usual auxiliaries in such complaints.

XV. Cases of Hydatides coughed up from the lungs, and of a sudden death from a rupture of the vena cava; by Dr. Doubleday, of Hexham.

XVI. An Account of the Tree producing the substance erroneously called Terra Japonica; by Dr. Fothergill.

XVII. Of the Management proper at the Cessation of the Menstrues; by the same. The cessation of the menses is often a critical period in the female constitution. About this time many women find the disorders to which they have formerly been subject, more frequent and troublesome. Some are seized with nervous symptoms, while others are attacked with inflammations, and the various concomitants of plenitude. After stating the different circumstances of patients, Dr. Fothergill makes the following remarks.

‘ Those of full plethoric habits, accustomed to copious evacuations; will find great relief by bleeding frequently in moderate quantities, keeping the bowels lax, and moderating their diet. They are, for the most part, attacked about the time of menstruation with sudden flushing heats, succeeded by instantaneous sweats, continuing for a few seconds, then going off for a short time, and again recurring many times in the day; they are worst after eating, in a room much heated, in large assemblies, in bed, attended with restlessness and frightful dreams. These gradually abate for a few weeks, and as the period approaches again, come on, and so successively, for a year or two, or more, terminating sometimes in large immoderate fluxes; sometimes in apoplexies, palsies, and other diseases arising from plenitude.

‘ If such are advised to lose four, five, or six ounces of blood, at the distance of two, three, or four months, just as the vehemence of the symptoms require, every thing of this

this may be happily prevented ; and as the occasion for bleeding daily decreases, its repetition may be put off to longer intervals.

‘ It happens frequently, that some circumstances attend the patients, which induce practitioners to omit this operation, or at least induce the patients to object to it in such a manner as to get it postponed. They allege they are subject to nervous complaints ; they never could bear bleeding ; it always hurt them, and the like. But with a full, hard pulse, great heat, and the other symptoms described, one need not fear the increase of any such complaints : on the contrary, as they proceed so evidently from plenitude, they seldom fail to give way to moderate and repeated evacuations.

‘ It is not unusual in such cases to be informed that the patient has swelled ancles ; and that bleeding would inevitably, at that time of life, bring on a dropsy. But if this fulness appears to be hard, inflamed, and painful, as is most commonly the case in some degree, the lancet and some gentle laxative will scarcely fail of removing, instead of aggravating, the complaint ; and recourse may be had to the same remedies, if the like complaints recur.

‘ There is another circumstance often happens at this period, sometimes owing to the neglect of evacuations at a proper time, sometimes to the use of improper medicines, sometimes to the peculiar constitution of the patient ; I mean an immoderate flux of the menses, which often requires the utmost care in its restraint and future regulation.

‘ For the most part this happens to women of sanguine habits, living well, accustomed to copious evacuations, or to the general effects of plenitude.

‘ If, in such constitutions, the evacuations are not very considerable, their health is often interrupted, either by frequent inflammations of the tonsils, and other glandular parts, or they have the rheumatism, erysipelas, or the piles ; if in these habits the menses cease very suddenly, they are either exposed to the complaints above mentioned, more frequently, and to a more violent degree, or to repeated and excessive floodings. A little attention to these circumstances will often point out the means of effectual prevention. But if it does happen, it seems much more prudent to restrain the flux by gentle laxatives, cooling medicines, rest, anodynes, a most sparing diet, and this not too liquid, than by very copious bleeding, and astringents of any kind.

‘ There is another kind of habit to which such immoderate discharges are too familiar. To persons of very irritable constitutions, and at the same time not remarkably plethoric. If in such constitutions the menses go off very suddenly, it happens sometimes that the impetus of the blood on the uterine system produces a violent hemorrhage that enfeebles extremely at the time, and as it increases the irritability of that part of the

the system in particular, subjects the patient to very frequent and expensive relapses.

‘ In these cases, bleeding would undoubtedly increase the disease. Medicines that allay irritation, anodynes, quiet, a moderate cordial, as wine, and a light nutritive diet, at once take off the cause, and enable the patient to support the expence with the less difficulty.’

Dr. Fothergill very justly disapproves of the administration of aloetic purgatives, in the complaints arising from the cessation of the menses; on account of their stimulating effect on the hæmorrhoidal veins, and the contiguous parts, by which are frequently produced the piles, strangury, immoderate uterine discharges, pains in the loins, and other similar disorders. He acknowledges there are many persons who cannot easily bear the more cooling purgatives; but observes that rhubarb, senna, magnesia, sulphur medicines, small doses of jalap, and combinations of them, will supply sufficient variety to the prescriber and the patient. He thinks, however, that it is more useful in curing these complaints, to contrive some easy method of obviating costiveness, than to have free recourse to purgatives of any kind.

Dr. Fothergill observes that when the menses are about to disappear, they for the most part occur irregularly, both in time and quantity; once in a fortnight, three, five, or six weeks, sometimes very sparingly, at other times in immoderate quantities. Great losses of this kind, he remarks, may often be prevented by taking away four or five ounces of blood; but he disapproves of the recourse to issues, unless when any cutaneous foulnesses, ulcerations, fugitive pains of the cancerous or rheumatic kind, and hardnesses in the breast, or other parts, may render such practice advisable. The doctor mentions two cases which sometimes occur; with the former of which we shall present our readers.

‘ A woman enjoying very good health, sometimes is seized with a total suppression of the menses, much sooner than they ought to disappear, perhaps soon after thirty years of age. A fever, surprise, anxiety, sudden and violent cold, especially if it happens at the time, will put a total stop to the discharge.

‘ For many months, sometimes a year or two, she feels very little effect upon her health by this suppression, perhaps grows plump, and seems disposed to corpulency; by degrees, however, she perceives herself not to be so well as usual; she is liable to colds, inflammations of the tonsils, erysipelatous eruptions, rheumatisms, but most commonly severe affections of the bowels, either inflammatory, bilious, or spasmodic; one or other of these return frequently, and often violently, in six

weeks, two months, or longer, but at no very regular periods; and in this manner continue to harass the constitution (if the person survives the severe attacks of the colic or other disorders incident to this state) till about the time when the menses should cease spontaneously.

An attention to the cause of these disorders supplies us with a natural and efficacious remedy. Substitute at convenient distances artificial evacuations, instead of the natural one that is suppressed, and, if possible, previous to the disorders to which the suppression has given rise; bleeding in small quantities two or three times a year; moderate purgatives frequently exhibited, and, particularly, attention to their diet, which ought to be moderate and mild. At the first sensations of sickness, or great heat and restlessness, or pains beginning to affect the stomach or bowels, or any of those symptoms which have usually been the forerunners of the disorders abovementioned, then is the season for preventing those difficulties which arise from this preternatural suppression.

We shall suspend the farther account of the articles contained in this volume, till our next Review.

[*To be concluded in our next.*]

Philosophical Transactions, of the Royal Society of London. Vol. LXVI. for the Year 1776. Part I. 4to. 7s. 6d. sewed. (Concluded, from p. 248.) L. Davis.

ART. IX. Violent Asthmatic Fits, occasioned by the Effluvia of Ipecacoanha. By William Scott, M. D. of Stamfordham, Northumberland.

The history of this extraordinary case affords undoubted evidence that the asthmatic complaint was actually produced by the cause to which it is attributed; the patient, who was a gentlewoman, being immediately seized with the disorder, from the effluvia of ipecacoanha, even though she was at a little distance from the apartment in which the apothecary was employed about the powder of that emetic root.

During the violence of the paroxysms she was generally blooded, her feet were put into warm water, an anodyne draught with some drops of laudanum was given her, and she took frequently a table spoonful of oil of almonds. Her recovery however seems never to have been much promoted by the use of any medicine. Dr. Scott has sometimes thought since, that perhaps musk in pretty large doses might have been of service in this case; and he has been informed by Mr. Leighton, a reputable surgeon and apothecary in Newcastle, that the

the

the effluvia of ipecacoanha had the very same effect upon his wife.

Art. X. An Account of the Success of some Attempts to freeze Quicksilver, at Albany Fort in Hudson's Bay, in the Year 1775; with Observations on the Dipping-Needle; by Thomas Hutchins, Esq.

From this account of experiments made to freeze quicksilver, in imitation of those of professor Barum, at Peterburgh, it is rather doubtful whether the congelation was really effected or not.

Of the observations made on the dipping needle, the mean of all those made on the 3d day of February 1775, was $79^{\circ} 17' \frac{1}{8}$; of those on the 13th of March, $79^{\circ} 25' \frac{1}{4}$; and of all those made on the 6th of May, $79^{\circ} 28' \frac{3}{4}$. And the mean of these three means is $79^{\circ} 23' \frac{7}{8}$; which it may be presumed is near the truth; notwithstanding some of the particular observations differ almost 3° from the mean quantity.

Art. XI. Astronomical Observations made in the Austrian Netherlands in 1772 and 1773. By Nathaniel Pigott, Esq. F. R. S.

These observations were made at the request of the government of the Austrian Netherlands, in order to determine by accurate observations the latitudes and longitudes of several of their towns; and by them it appears that those of Namur, Luxembourg, La Heese, Hoogstraeten, Ostende, and Tournai, are pretty accurately settled.

Art. XII. An Account of some Attempts to imitate the Effects of the Torpedo by electricity. By the hon. Henry Cavendish, F. R. S. Mr. Cavendish sets out with observing, that though the proofs brought by Mr. Walsh, for confirming the phenomena of the torpedo to be produced by electricity, are such as leave little room for doubt; there are however some circumstances, which at first sight seem scarcely to be reconciled with this supposition. To examine whether these circumstances are really incompatible with such an opinion, as well as to give an account of some attempts to imitate the effects of this animal by electricity, is therefore the design of the enquiry, which appears to be conducted by Mr. Cavendish with equal ingenuity and judgment. The length of the paper, however, with the necessary concatenation of experimental observations and inferences, will not permit us to enter into a detail of what is advanced on this subject.

Art. XIII. Observations on Respiration, and the use of the Blood. By Dr. Priestley. The following passage from these observations will shew the opinion entertained by Dr. Priestley on this subject, which has afforded so much ground for conjecture among physiological writers.

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‘ There is, perhaps, no subject in physiology, and very few in philosophy in general, that has engaged more attention than that of the use of respiration. It is evident, that without breathing most animals would presently die; and it is also well known, that the same air will not long answer the purpose; for if it has been frequently respired, the breathing of it is as fatal as the total deprivation of air. But by what property it is, that air contributes to the support of animal life; and why air that has been much breathed will no more answer the purpose, seems not to have been discovered by any of the many philosophers and physicians who have professedly written upon the subject; and it might have continued to elude all direct investigation, when it discovered itself, without any trouble or thought, in the course of my researches into the properties of different kinds of air, which had at first quite another object.

‘ In these experiments it clearly appeared, that respiration is a phlogistic process, affecting air in the very same manner as every other phlogistic process (*viz.* putrefaction, the effervescence of iron filings and brimstone, or the calcination of metals, &c.) affects it; diminishing the quantity of it in a certain proportion, lessening its specific gravity, and rendering it unfit for respiration or inflammation, but leaving it in a state capable of being restored to a tolerable degree of purity by agitation in water, &c. Having discovered this, I concluded, as may be seen, *Phil. Trans.* vol. LXII. p. 187; and *Observations upon Air*, vol. I. p. 78. 277, that the use of the lungs is to carry off a putrid effluvium, or to discharge that phlogiston, which had been taken into the system with the aliment, and was become, as it were, effete; the air that is respired serving as a menstruum for that purpose.

‘ What I then concluded to be the use of respiration in general, I have now, I think, proved to be effected by means of the blood, in consequence of its coming so nearly into contact with the air in the lungs; the blood appearing to be a fluid wonderfully formed to imbibe, and part with, that principle which the chemists call phlogiston, and changing its colour in consequence of being charged with it, or being freed from it; and affecting air in the very same manner, both out of the body and in the lungs; and even notwithstanding the interposition of various substances, which prevent its coming into immediate contact with the air.’

Art. XIV. Experiments on Water obtained from the melted Ice of Sea-water, to ascertain whether it be fresh or not; and to determine its specific Gravity with respect to other Water. Also Experiments to find the Degree of Cold in which Sea-water begins to freeze. By Mr. Edward Nairne.

Art. XV. Easy Methods of measuring the Diminution of Bulk, taking place upon the Mixture of common Air and nitrous Air; together with Experiments on Platina. By John

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Ingenhouz, M. D. Physician to their Imperial Majesties at Vienna. It appears from the experiments on the latter of these subjects, that the whole of the platina, and not a considerable part only, as had been asserted by some writers, were affected by the magnet more or less, except some transparent stony particles, which all were magnets in themselves.

Art. XVI. An Account of three Journeys from the Cape Town into the Southern Parts of Africa; undertaken for the Discovery of new Plants, towards the Improvement of the Royal Botanical Gardens at Kew. By Mr. Francis Masson, one of his Majesty's Gardeners.

In prosecuting the first of these journeys Mr. Masson set out from the Cape Town on the 10th of December, 1772, attended by a Dutchman, and a Hottentot who drove his wagon, drawn by eight oxen, which is the manner of travelling in that country. In a few hours they arrived at a large sandy plain, about thirty miles in extent, which, though unfit for cultivation, is overgrown with an infinite variety of plants peculiar to the country. Continuing their route, they observed many fine plantations, abounding with corn-fields and vineyards; when coming to the district called Draakensteen, a valley about ten miles in length, and five in breadth, they met with orchards of most kinds of European fruit, which had been transported hither by the Dutch.

The most remarkable objects which Mr. Masson observed, were two large solid rocks, of a roundish figure; each of which, he believes, is more than a mile in circumference at the base, and upwards of two hundred feet high. Their surfaces are nearly smooth, without chink or fissures, and they are found to be a species of granite, different from that which compose the neighbouring mountains.

In the beginning of January the travellers reached Stellenbosch, a small village thirty miles N. E. of the Cape Town, consisting of about thirty houses, forming one regular street, with a row of large oak-trees, on each side along the front of the buildings. These oaks, which are of the same sort with ours in England, were brought out of Europe by Adrian Vanderstell, formerly governor of the Cape. The adjacent country is populous, and contains many rich farms, which produce plenty of corn and wine.

‘ The farmers, says Mr. Masson, we found busy in treading out their corn; which is performed by horses in the following manner. They make a circular floor about thirty, forty, or fifty feet diameter, with a composition of clay and cow-dung, which binds very hard; round it they erect a mud wall, about
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breast high; this floor they cover with sheaves, beginning in the middle, and laying them in concentric circles till they reach the outside. They then turn in about twenty or thirty horses, which a Hottentot, furnished with a long whip, drives round and round till the corn be trodden out, and the straw become as fine as chaff; which they afterwards clean, and carry into their granaries. This method they can practise with great security, as it seldom rains here from the middle of October to the middle of March.

‘ From thence we travelled along the foot of the Stellenbosch mountains to Hottentot Holland, a pleasant and level country; surrounded on three sides by the mountains; and the other opening to the east part of Falzo bay. In it are eight or ten plantations, with elegant houses, gardens, vineyards, and corn fields: this country lies about thirty-five miles east from the Cape Town.

‘ We ascended the mountains by an exceedingly steep rugged path, which the peasants call Hottentot Holland Kloof; and after much labour and fatigue gained their summit, when we entered a spacious plain, interspersed with an infinite number of large fragments of rocks, visibly decayed by the force of the S. E. wind, which blows here during the summer with very great force. Some of these rocks appeared like the ruins of church-steeple, and were worn so thin with wind and rain, that the softer parts of them were perforated in many places. They are formed of the *cos quadrum* of Linnæus. The soil about them is a black earth intermixed with a pure white sand, probably proceeding from the decay of the rocks. These mountains abound with a great number of curious plants, and are, I believe, the richest mountains in Africa for a botanist. We then passed the Palmet Rivier, so called by the peasants from a plant, which almost covers the water; the leaves of which greatly resemble that of the ananas or pine-apple, but their flowers are like those of a reed. At night we crossed a small river, called Boter Rivier; and took up our lodging at a mean cottage, where the Dutchmen and Hottentots live almost promiscuously together, their beds consisting only of sheep’s skins. The next morning an old Hottentot brought out a fat wether, and slaughtered it; part of which we eat for our breakfast.

‘ We came to a hot bath, situated on the S. E. side of a large mountain called Zwart Berg. The India Company have erected here a tolerable house for the reception of sick people. The water is scalding hot where it springs out of the earth; but after being conveyed about ten or twelve paces to the bath, it becomes more temperate. The people here seem to use it for all diseases without exception, and often perhaps receive more hurt than benefit by it.

‘ We crossed Rivier Zonder Eynde; that is, Endless River, which discharges itself into the Breed River. At night we came to Sweet Milk Valley, where there is a good house belonging

to the overseer of the Company's woods; who received us with great civility, and kept us with him five days. The fourth day, we went into the woods, which are about half-way up a high chain of mountains that extends along the N. and N. E. side of the valley. I was accompanied by a farmer's son, who took with him eight large rough dogs, which in our way started two wolves; one of them we wounded with small shot, so that the dogs overtook him. A fierce battle ensued, which lasted an hour before he was killed. We afterwards climbed over many dreadful precipices till we arrived at the woods; which were dark and gloomy, interspersed with climbing shrubs of various kinds. The trees are very high; some from eighty to a hundred feet; often growing out of perpendicular rocks where no earth is to be seen. Among these the water sometimes falls in cascades over rocks two hundred feet perpendicular, with awful noise. I endured this day much fatigue in these sequestered and unfrequented woods, with a mixture of horror and admiration. The greatest part of the trees that compose them are unknown to botanists. Some I found in flower; others, which were not so, I was obliged to leave for the researches of those who may come after me in a more fortunate season.

'I visited a Hottentot kraal: the men were all, at this time, attending their herds: but the women and children were employed in building their huts; which are very low, of a circular figure, and made of slender poles, the ends of which are stuck into the ground, so as to form a number of arches crossing one another; these they afterwards cover with mats made of reeds. They have a round hole in the middle of the floor, in which they make the fire, and sit all round it upon the ground; but have no chimney or hole to let out the smoke.'

Mr. Masson performed his second journey in company with Dr. Thunberg, a native of Sweden, who was sent out by the Dutch to collect plants at the Cape, and is now on that errand in the East Indies. They set out on this excursion the 11th of September, 1773, and returned to Cape Town in the end of January following; after discovering a great variety of uncommon plants, and experiencing both the pleasure and disasters incidental on a journey through parts so little visited by strangers.

The journal of Mr. Masson's third excursion begins on the 26th of September, 1774, and ends the 15th of December. Notwithstanding the great number of plants which this traveller appears to have collected in the country adjacent to the Cape, he informs us that many more remain for the gratification of those botanists who may hereafter prosecute such researches.

In this first part of the volume of the Transactions for 1776, is given the Meteorological Journal from March 1775, to
March

March 1776, made with the usual accuracy. From which it appears that, for the whole year, the mean height of the thermometer without the house was 51.5: that of the thermometer within 52.7; that of the barometer 29.833; that of the variation of the magnetic needle $21^{\circ} 43'$, and that of the dipping needle $72^{\circ} 30'$.

Interesting Letters of Pope Clement XIV. (Ganganelli) to which are prefixed, Anecdotes of his Life. Translated from the French Edition published at Paris by Lottin, jun. 2 vols. 12mo. 6s. Becket.

THE author of these Letters, John-Vincent-Antonio Ganganelli, afterwards pope Clement XIV. was the son of a physician of St. Arcangelo, near Rimini, in Italy. He was born in the year 1705, and received the first rudiments of his education at Rimini. At the age of eighteen, he commenced his noviciate in the order of St. Francis at Urbino; at which time he took the name of Francis Laurence. He then pursued his studies at Pesaro, Recanati, Fano, and Rome; and soon afterwards taught philosophy and theology at Ascoli, Bologna, and Milan. At the age of thirty-five he was called to Rome by his superior, to teach theology in the college of St. Bonaventura. Though he wished to remain immured in his cloister, yet his talents could not be concealed. He was visited by the most eminent for rank and learning; and similarity of genius recommended him to Lambertini (Benedict XIV.) who appointed him one of the council of the holy office. Cardinal Rezzonico, bishop of Padua, succeeded Benedict in 1758, under the name of Clement XIII. and the year after, to the great surprize of Ganganelli, made him cardinal.

Notwithstanding his genius and good qualities attracted almost universal homage, yet there was no room to imagine, that he would ever be chosen pope. Besides the freedom with which he had given his opinion, with regard to some proceedings of the court of Rome, which did not gain him the good will of the cardinals, he had given advice so opposite to the sentiments of the pontiff, and his secretary of state, on the subject of Parma, and the affair of the Jesuits, that he was no longer consulted. Clement XIII. was very well disposed; but he had the misfortune to lose his secretary of state, and to choose a successor, who was too much the declared friend of the Jesuits; and this produced some disagreeable consequences. Portugal redoubled her complaints, and the affair

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of Parma completed the mischief; the king of France seized Avignon, and the king of Naples, Benevento.

Ganganelli was alarmed at the storm, which was gathering on all sides, and saw the depth of the tomb, which was to bury the Roman glory, if no endeavours were used to calm these powerful princes.

The pope seeing himself pressed by the houses of Bourbon and Braganza, who earnestly insisted on the suppression of the Jesuits, at last appointed a consistory, that he might acquaint the members of that illustrious assembly, with the necessity of submitting to the offended kings: but the preceding night, Feb. 2, 1769. he was seized with a violent convulsion, and expired.

The meeting of the conclave in this critical situation was like a clouded sky, or rather a tempest. The cardinals met. Almost all of them were of different opinions. Some were for choosing a pontiff, who would struggle against the power of the kings; while others were equally desirous of electing one, who would prove agreeable to them: both parties disputed with great zeal.

The conclave lasted above three months, and became tumultuous from the difficulties which occurred in the nomination of a pontiff.

On the 18th of May, the sacred college, finding that Ganganelli would be most agreeable to the kings, on account of his sentiments respecting the disputes then subsisting, and knowing likewise, that he was learned and virtuous, proclaimed him sovereign pontiff. In gratitude to Clement XIII. who had made him cardinal, he took the name of Clement*.

He began his reign with universal applause, and immediately pursued the most prudent and effectual measures to terminate all disputes with the catholic powers. The affair of the Jesuits was urged daily by some of those princes, and their ambassadors. But such was his moderate spirit, and love of justice, that he was determined to weigh every circumstance with the utmost attention, before he would decide. 'Let me, said he to the sovereigns who pressed him to determine, have leisure to examine the important business, upon which I am to pronounce. I am the common father of the

* Sergius [II. an 844.] when he was elected pope, thinking that his own name, *Buccaporcius*, or *Bocca di porco*, *Swine's-snout*, was not consonant to his dignity, took that of Sergius. From this precedent his successors derived the custom of changing their names. Hoffman. Lexic. Platina, if Collier quotes him rightly, ascribes this change of his name to Sergius I; Moreri, to Sergius IV. Non nostrum tantas componere lites,

faithful, particularly of the religious; and I cannot destroy a celebrated order, without having sufficient reasons to justify me in the eyes of all ages, and, above all, before God.'

In the mean time, he discharged the manifold and arduous functions of a pope with the greatest prudence and integrity; and endeared himself to his subjects, and to strangers of every country by his affability and condescension.

When every argument, which could be produced either against, or in favour of the Jesuits, had been strictly examined, during an enquiry, which continued four years, he at last named a commission, consisting of five cardinals, some prelates and advocates, to assist him in the execution of his design; and, after the maturest deliberation, signed the brief on the 21st of July, 1773, which suppressed that famous order.

On the 10th of August following, the commissioners appointed for the execution of the brief, accompanied by a notary, and attended by a guard, went to the different houses of the Jesuits, and having assembled the brethren, read to them the brief of their extinction; at the same time informing them, that the apostolic chamber would furnish each of them with a secular habit, pay the travelling expences of those who chose to quit Rome; that their books and effects should be delivered to them, and that they should have pensions.

In April 1774, his holiness was first observed to decline; and soon after was tormented with violent pains in his bowels, of which he languished for five months, and died on the 22d of September. It was generally supposed, that he fell a sacrifice to the resentment of the Jesuits.

During his whole pontificate he was never observed to be either dazzled by the splendor of the triple crown, or dismayed by the troubles and difficulties, which he was forced to encounter. His life was a model for future popes.

The letters, contained in these volumes, were written to many different persons, some of whom were of high rank, between the years 1747, and 1773, but very few after the author's elevation to the papal chair.

With respect to their character, it may be said, we do not find in them that pleasing variety of subject, that agreeable mixture of classical learning, or any great number of those historical and literary anecdotes, which captivate an English reader of taste and erudition. Yet, it must be confessed, that we meet with many liberal sentiments, many lively sallies of imagination, and many remarks, which indicate a penetrating genius, a philosophical disposition, and an intimate knowledge of the human heart.

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As Italy is a capital object of curiosity among all fashionable and inquisitive travellers; endeared to the beau monde by its polite arts, painting, singing, fiddling, and dancing; and to the literati, by the productions of the classic ages, we cannot give our readers any extract, which will be more agreeable, than the following lively description of that country.

* L E T T E R II.

* To the Abbé Ferghen.

* Monf. Abbé,

* You cannot do better to divert yourself from your troubles and embarrassment than to visit Italy. Every well-informed man owes an homage to this country, so deservedly boasted of; and it will give me inexpressible satisfaction to see you here.

* You will instantly see the great bulwarks given us by nature in the Alps and Apenines, which separate us from France, and have made them give us the name of Tramontanes. They are a majestic range of mountains, which serve as a frame to the magnificent picture within them.

* Torrents, rivulets, and rivers, without reckoning the seas, are objects which present the most curious and interesting points of view to foreigners, and especially to painters. Nothing can be more agreeable than the most fertile soil in the finest climate, every where intersected with streams of running water, and every where peopled with villages, or ornamented with superb cities.—Such a country is Italy!

* If agriculture *was* held in equal esteem with architecture:—if the country was not divided into such a number of governments, all of different forms, and almost all weak, and of little extent; misery would not be found by the side of magnificence, and industry without activity; but unfortunately we are more engaged in the embellishment of cities, than in the culture of the country; and uncultivated lands every where reproach the idleness of the people.

* If you begin your route at Venice, you will see a city very singular from its situation;—it is precisely a great ship resting upon the waters, and which cannot be approached but by boats.

* The singularity of its situation is not the only thing that will surprise you.—The inhabitants in masque for four or five months in the year;—the laws of a despotic government, which allow the greatest liberty in their amusements; the rights of a sovereign without authority; the customs of a people who dread even his shadow, and yet enjoy the greatest tranquility; form inconsistencies, which in a very extraordinary manner, must affect foreigners. There is scarcely a Venetian who is not eloquent;—collections have been made of the *bon mots* of their gondoliers, replete with true Attic salt.

‘ Ferrara displays a vast and beautiful solitude within its walls, almost as silent as the tomb of Ariosto, who was buried there.

‘ Bologna presents another kind of picture : there the sciences are familiar even to the fair sex, who appear with dignity in the schools and academies, and have trophies erected to them daily. A thousand different paintings will gratify your mind and eyes, and the conversation of the inhabitants will delight you.

‘ You will then pass through a multitude of small towns, in the space of more than a hundred leagues, each of which has its theatre, its casin (a rendezvous for the nobility), a man of learning, or some poet, who *employ themselves* according to their fancy, or their leisure.

‘ You will visit Lorretto, made famous by the great concourse of pilgrims from other countries, and the treasures with which the church is magnificently enriched.

‘ You will then descry Rome, which may be seen a thousand years, and always with new pleasure. This city, situated upon seven hills, which the ancients call the Seven Mistresses of the World, seems to command the universe, and boldly to say to mankind, that she is the queen, and the chief.

‘ You will call to mind the ancient Romans, the remembrance of whom can never be effaced, on casting an eye on the famous Tiber, which has been so often mentioned, and which has been so frequently swelled by their own blood, and the blood of their enemies,

‘ You will be in extacy at the sight of St. Peter’s, which connoisseurs say is the wonder of the world, being infinitely superior to the St. Sophia at Constantinople, St. Paul’s at London, or even the Temple of Solomon.

‘ It is a pile which extends in proportion as you go over it, where every thing is immense, yet appears of an ordinary size. The paintings are exquisite, the monumental sculptures breathe, and you will believe that you see the New Jerusalem come down from Heaven, which St. John speaks of in the Revelations.

‘ You will find, both in the great, and in the detail, of the Vatican, which was erected on the ruins of false oracles, beauties of every kind that will tire your eyes, while they at the same time charm you. Here Raphael and Michael Angelo, sometimes in a sublime, sometimes in a pathetic manner, have displayed the master-pieces of their genius, by expressing in the most lively language the whole energy of their souls ;—and here the science and genius of all the writers in the world are deposited, in the multitude of works which compose that rich and immense library.

‘ Churches, palaces, public squares, pyramids, obelisks, pillars, galleries, grand fronts of buildings, theatres, fountains, gardens, views, all, all will declare to you that you are at Rome ;

Rome; and every thing will attach you to it, as to the city, which of all others has been universally admired. You will not meet with that French elegance which prefers the beautiful to the sublime; but you will be amply recompensed by those striking views that every instant must excite your admiration.

‘ Lastly, in all the figures of painting or sculpture, both ancient and modern, you will see a new creation, and believe it animated. The Academy of Painting, filled with French students, will shew you some who are destined to become great masters in their profession, and who by coming to study here, do honour to Italy.

‘ You will admire the grandeur and simplicity of the head of the church, the servant of servants in the order of humility, and the first of men in the eyes of the faithful. The cardinals who surround him, will represent to you the twenty-four old men who surround the throne of the Lamb, modest in their manners, and instructive by their morals.

‘ But this magnificent prospect will terminate with a view of groupes of mendicants, whom Rome improperly supports, by bestowing misapplied charity, instead of employing them in useful labours: thus it is that the thorn is seen with the rose, and vice too frequently by the side of virtue.

‘ But if you wish to see Rome in all her splendor, endeavour to be there by the feast of St. Peter. The illumination of the church begins with a gentle light, which you will easily mistake for the reflection of the setting sun: it then sends forth pieces of beautiful architecture, and afterwards finishes with waving flames, which make a moving picture, that lasts till day-break. All this is attended with double fireworks, the splendor of which is so bright, that you would think the stars had been plucked from heaven, and burst upon the earth.

‘ I do not mention to you the strange metamorphosis which has placed the Order of St. Francis even in the Capitol, and has produced a new Rome from the ruins of the old; to shew the world that Christianity is truly the work of God, and that he has subdued the most famous conquerors to establish it in the very centre of their possessions. If the modern Romans do not appear warlike, it is because the nature of their government does not inspire them with valour; but they have the seed of every virtue, and make as good soldiers as any, when they carry arms under a foreign power. It is certain that they have a great share of genius, a singular aptitude in acquiring the sciences; and you would imagine they were born harlequins, so expressive are they in their gestures, even from their infancy.

‘ You will next travel by the famous Appian Way, which by its age is become wretchedly inconvenient, and you will arrive at Naples, the Parthenope of the ancients, where the ashes of

Virgil are deposited, and where you will see a laurel growing, which could not possibly be better placed.

• Mount Vesuvius on one side, and the Elysian Fields on the other, will present a most matchless view to you; and after being satisfied with this delightful prospect, you will find yourself surrounded by a multitude of Neapolitans, lively and ingenious, but too much addicted to pleasure and idleness, to become what they otherwise might be. Naples would be a delightful place, if it was not for the crowds of people of the lowest rank, who have the appearance of unhappy wretches, or robbers, though often without being either the one or the other.

• The churches are magnificently decorated, but their architecture is in a wretched taste, and by no means comparable to the Roman. You will have a singular pleasure in traversing the environs of this town, which is most delightful, from its delicious fruits, charming views, and fine situations. You will penetrate into the famous subterranean city of Herculaneum, which was swallowed up in a former age by an eruption of Mount Vesuvius. If the mountain happens to be raging, you will see torrents of fire issue from its bowels, and majestically overspread the country. You will see a collection of whatever has been recovered out of Herculaneum, at Portici; and the environs of Puzzuolo, sung by the prince of poets, will inspire you with a true passion for poetry.

• You must walk with the *Æneid* in your hand, and compare the cave of the Cumæan Sybil and Acheron with what Virgil has said on those subjects.

• You will return by Caserta, which from its decorations, marbles, extent, and aqueducts worthy of ancient Rome, is the finest place in Europe: and you will make a visit to Mount Cassino, where the spirit of St. Benedict has subsisted uninterruptedly above a dozen ages, in spite of the immense riches of that superb monastery.

• Florence, from whence the fine arts have issued, and where their most magnificent master-pieces are deposited, will present other objects to your view. There you will admire a city, which, according to the remark of a Portuguese, *should only be shewn on Sundays*, it is so handsome and beautifully decorated. You will every where trace the splendor and elegance of the family of Medici, inscribed in the annals of taste as the restorers of the fine arts.

• Leghorn is a well inhabited sea port, of great advantage to Tuscany. Pisa always has men of learning, on every subject, in its schools. Sienna, remarkable for the purity of its air and language, will interest you in a very singular manner. Parma, placed in the midst of fertile pastures, will show you a theatre which can contain fourteen thousand people, and where every one can hear what is said, though spoken in a whisper. Placentia

centia will appear to you worthy of the name it bears, as its delightful situation must captivate every traveller.

‘ You will not forget Modena, as it is the country of the famous Muratori, and a city celebrated for the name which it has given to its sovereigns.

‘ You will find at Milan the second church in Italy, for size and beauty: more than a thousand marble statues decorate its outside, and it would be a master-piece, if it had a proportionable front. The society of its inhabitants is quite agreeable, ever since it was besieged by the French. They live there as they do in Paris, and every thing, even to the hospitals and church-yards, presents an air of splendor. The Ambrosian library must engage the curious; and the Ambrosian ritual no less engage the churchman, who wishes to know the usages of the church, as well as those of antiquity.

‘ The Boromean Isles will next attract your curiosity, from the accounts you must have had of them. Placed in the middle of a delightful lake, they present to your view whatever is magnificent or gay in gardens.

‘ Genoa will prove to you that it is truly superb in its churches and palaces. There you will see a port famous for its commerce, and the resort of strangers. You will see a doge changed almost as often as the superiors of communities, and with scarce any greater authority.

‘ And lastly Turin, the residence of a court where the virtues have long inhabited, will charm you with the regularity of its buildings, the beauty of its squares, the straightness of its streets, and the spirit of the people; and there you will agreeably finish your journey.

‘ I have been just making the tour of Italy, most rapidly and at little expence, as you see, to invite you to it in reality; — ’tis sufficient to *sketch* paintings to such a master as you.

‘ I make no mention of our morals to you; they are not more corrupt than among other people, let malice say what it will; they vary only their shades according to the difference of the governments.—The Roman does not resemble the Genoese, nor the Venetian the Neapolitan; but you may say of Italy as of the whole world, that, with some little distinctions, it is here as it is there, *a little good and a little bad*.

‘ I do not attempt to prejudice you in favour of the agreeableness of the Italians, nor of their love of the arts and sciences: you will very soon perceive it when you come among them; you of all men, with whom one is delighted to converse, and to whom it will always be a pleasure to say that one is his most humble and most obedient servant.

‘ I have taken the opportunity of a leisure moment to give you some idea of my country; it is only a coarse daubing, which in another hand would have been a beautiful miniature: the subject deserves it, but my pencil is not sufficiently delicate for the execution.’

The private Letters of a pope are such phenomena in the literary world, that they will naturally attract the public attention much more than the productions of an ordinary writer ; we shall therefore give our readers some farther extracts from this publication in a future article.

[*To be continued.*]

A Series of Answers to certain popular Objections, against separating from the rebellious Colonies, and discarding them entirely : being the concluding Tract of the Dean of Gloucester, on the subject of American Affairs. 8vo. 2s. Cadell.

FROM the account we have given at different times, of Dr. Tucker's several tracts relative to American affairs, we presume that our readers are sufficiently acquainted with his proposal of totally abandoning that continent ; a measure which he thinks would be productive of no disadvantage to the commerce of Great Britain, and might conduce to the preservation of our tranquility. In the present tract he endeavours to enforce this proposition, by answering the various objections which have been suggested against it. For the satisfaction of our readers, we shall lay before them those Objections in the order in which they stand, and at the same time give an abstract of the arguments advanced by the doctor in reply.

Objection I. "How shall the merchants and manufacturers of Great Britain recover their property out of the hands of the Americans, or sue for their debts, in case of a separation ?"—Answer. While Great Britain and America remain connected together under any form of government, this difficulty of recovering British property out of the hands of the colonists will never cease ; and a total separation is the most effectual cure. In case of a total separation, each province will become independent, and a jealous rival of its neighbour. No common interest will then unite them : and the fears and jealousies of trade will more effectually operate in such a case, to ensure their honesty and punctual dealings, than the better principles of conscience and religion.

Object. II. "How shall we prevent the West India islands from falling under the power of the growing empire of America, in case of a separation ?"—Answer. The northern and southern colonies of America have, and ever had, an inveterate antipathy against each other, which nothing prevents from breaking out into action even at present, but the apprehension of common danger. Remove this apprehension, and they will

will not unite in one general association; without which it will be impossible for any one of these republics to make the conquest here proposed. Should two or three of these little republics join together in such an expedition, the rest, from a principle of jealousy, would oppose them to the utmost of their power, and would invite the assistance of Great Britain. Supposing, however, against all probability, that the Americans not only took possession of these islands, but cultivated them, or permitted the inhabitants to cultivate them, what would be the consequence? Nothing but this, says Dr. Tucker, that the British merchants would in that case buy sugars, rum, ginger, cotton, &c. just as they now buy wines, fruit, oils, coffee, &c. that is, at the *best* and *cheapest* market.

Object. III. "How shall we prevent the North Americans from becoming a formidable maritime power in case of a separation?"—Answer. We may always prevent any one of these states from swallowing up the rest: in the execution of which we shall be sure of obtaining the assistance of the neighbouring rival states. And this circumstance alone will prevent their becoming a formidable naval power.

Object. IV. "Will not the present war, now carried on with so much rancour and animosity, prevent the English and the Americans from trading with each other in case of a separation?"—Answer. If there be any force in this objection, the sooner a separation shall take place, the better; for nothing short of this can be a radical cure.

Object. V. "If we should lose the northern colonies, where shall we get pitch and tar, masts and naval stores for our navy?"—Answer. The French, Dutch, and Spaniards, who have no northern colonies, are supplied with all these articles at a moderate price, and without bounties. What therefore should prevent Britain from being supplied from the same source, and on as good terms?

Object. VI. "In case of a separation, where shall we get pipe-staves, and other lumber for our West India islands? and above all, where shall we get provisions?"—To this objection the author answers by the following interrogatory. 'Where or from whence do the French and Spaniards, Dutch and Danes procure provisions, pipe-staves, and lumber for their respective West-India settlements? The answer to this question will serve for both.'

Object. VII. "In case of a separation, from whence shall we procure rice and tobacco?"—Our author remarks that this objection turns on two suppositions. 1. That after a separation the Virginians and Carolinians will not sell those articles to British merchants for a good price, and ready money. 2dly.

That tobacco and rice can grow in no part of the globe, but in Virginia and Carolina. 'Will any man in his senses,' says Dr. Tucker, 'dare to affirm either of these things?'

Object. VIII. "In case of a separation, will not the North Americans set up various manufactures of their own, and lay heavy, discouraging duties on the importation of ours?"—Answer. Experience proves beyond contradiction, that we do actually send vast quantities of British manufactures to Spain, Italy, Germany, Russia, Holland, and even to France; though each of these countries has long established similar manufactures of its own, and laid discouraging duties on ours. The colonists have already, and long before the commencement of the present contest, set up every species of manufacture, which could be attended with any probability of success. That in regard to the capability of America to rival Great Britain in the cheapness and goodness of manufactures (which are the main points to be attended to) America naturally labours under many capital defects respecting manufactures.

Object. IX. "Will not a separation from the northern colonies greatly decrease the number of seamen?"—Answer.

'By the term *our* seamen must be meant British seamen, in contradistinction to North Americans. And then the objection supposes, that a separation will necessarily decrease the shipping and navigation belonging to the ports of Great Britain and Ireland. But what proofs are there to be brought of this? And without *some* proof, why must the objection be admitted?

'The obvious reasoning on the case suggests just the contrary. For after a separation has taken place, the act of navigation will operate as effectually against the North Americans, as against the French, Hollanders, or any other nation. Consequently they (the Americans) will no longer be permitted to be the carriers of sugars, rum, cotton, coffee, pimento, mahogany, logwood, and all other woods and articles for dying, &c. &c. from our own islands, from the Mosquito shore, or the Spanish main, into Great Britain or Ireland:—nor will they be permitted to carry any of our manufactures, salt-fish, or provisions, any of our malt liquors, cyder, or any wines, from Great Britain or Ireland to the sugar colonies, or to any of our settlements in any part of the world. Judge therefore from this enumeration of facts certain and indisputable, on which side would the naval balance preponderate in case of a separation. But this is not all; for we have at least 150,000 lamps burning every winter in Great Britain and Ireland, more than we had 60 or 70 years ago; and their number is every year encreasing. Now the North Americans used to supply us with at least one third, if not one half of the oil (extracted from fishes) used and

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consumed, in these lamps:—all which, together with several articles depending on them, will for the future be supplied by British and Irish sailors. Therefore what a nursery is here! How growing and extensive! And yet how little attended to, 'till the North Americans obliged us, as it were, whether we would or not, to see our own interest!

Object. X. "Would it not be better to continue some kind of union with the colonies at any rate, rather than to throw them entirely off? Suppose both parties of the British nation, the European and the American, were to remain united under one, and the same prince, but to act as distinct and separate states, independent of each other in all other respects; would not even this be more desirable than a total separation?"—Dr. Tucker proceeds to answer this objection, by denying the propriety of the parallel which has been drawn by some writers, between America and Hanover, in this case; after which he breaks out into the following animated apostrophe.

"Away ye advocates for treason and rebellion! Away with such Jesuitism and chicane! And ye pretended patriots, either stay and reason at home like fair and honest men; or else throw off your disguise, act openly, and leave us. Go, and join your associates in America, and there be happy in your free and equal democratic governments. There preach up the doctrine, that every human moral agent is to be his own legislator, his own governor, and his own director. There maintain your *fundamental paradox*, that no man ought to obey any laws, imposed upon him without his own consent: and there also refuse to pay any taxes, which had not received your own approbation. The congress, both provincial and continental, will undoubtedly listen with attentive ears to these instructive lessons: and they will suffer you to spurn at their authority with the same impunity, that you spurn at ours."

Object. XI. "Will not the severing America from England have the same effect in our political constitution, as that of cutting off, or taking away a main prop, a massy pillar, or a strong buttress from an ancient, crazy building?"—To this the doctor answers, that metaphorical objections are best confuted by metaphorical replies. The English constitution is by no means crazy in itself: it is built of materials the best, the strongest, and the most durable of any in the world. Quitting metaphor, the doctor afterwards has recourse to other arguments, for which we refer to the work.

Object. XII. "If it be right to separate from North America, will not the same arguments lead to prove, that it will be right to separate from Ireland also? But can such a scheme be consistent with common sense, or common prudence?"—

Here

Here the author enters into a train of argument, shewing that there is no connection between the two cases.

Object. XIII. "If we should separate from North America, what recompence shall we be able to make to those faithful Americans who have suffered for their loyalty to the king, and their allegiance to the British government?"—Answer. The continuance of the war is not a likely method of procuring a just and adequate compensation for the unhappy sufferers. That the best method would be, to order a fair and reasonable estimate to be made of their losses, and then to indemnify the sufferers out of the current services of the year.

Object. XIV. "Who will dare to move in either house of parliament for the separation here proposed?"—With respect to this objection, the author observes that we are not so destitute of men of unbiassed principles, and of independent fortunes, as to despair of success.

To the *Series of Answers*, Dr. Tucker has subjoined a Conclusion, where we meet with the following passage, which is so expressive of his sincerity as a political writer, that we shall give it a place in our Review.

'As a clergyman, it is often objected to me, that I am a mercenary wretch (or as Mr. Burke was pleased to phrase it, a *court vermin*) writing for preferment. This is very hard and cruel, after so many solemn declarations to the contrary. Let it therefore be observed, that whereas I had often said before, I would never directly, or indirectly *seek* for preferment; I will here add, once for all, that I will never *accept* of any, even though offered to, and pressed upon me. So help me God.'

As the author informs us that this is the last time he intends to address the public on the subject of American affairs, we shall likewise insert the Postscript to the present treatise,

'The foregoing treatise was finished, and a great part sent to the press, before the news arrived of the success of his majesty's forces against the American rebels. Probably this circumstance may make a great alteration in some men's minds, respecting the necessity or expediency of a total separation. But, alas! arguing from mere contingencies and the chance of war, is at best a very precarious method, and is the more fatally delusive, as it is so flattering to human vanity. Indeed it has no weight at all, if put in the balance against the natural, and therefore in the end the necessary course of things. It was certainly as much the interest of the English nation to have abandoned France, immediately after the shining victories of Agincourt and Cressy, as ever it was either before, or since.

But,

But, alas! who is so wise and prudent as to make cessions immediately, after having gained a victory, or made a conquest?

'The only proper inference to be drawn from our present success is, to terminate the war with more speed, and with greater reputation. It is now wholly in our power to provide proper settlements for the loyal part of the Americans in the four central provinces of New York, New Jersey, Maryland, and Pennsylvania; which provision and settlements perhaps it may not be in our power to make some years hence, or after a reverse of fortune. Therefore we ought to embrace the present opportunity ere it be lost;—and *conclude the war*. National interest, national honour, good policy, and the principles of permanent, extensive commerce, all unite in this point.'

After all the arguments with which this ingenious writer has recommended a separation from North America, it is not to be presumed that the proposal will ever be carried into execution, by an act of the legislature. Should such a separation happen, however, in a remote period, and the political speculations of the present time be likewise transmitted to future ages, posterity may determine of the advantage or inutility of Dr. Tucker's proposal, with greater certainty than can be supposed to result from arguments drawn *a priori*.

Letters on Materialism and Hartley's Theory of the Human Mind, addressed to Dr. Priestley, F. R. S. 8vo. 2s. 6d. boards. Robinson.

DR. Hartley's Theory of the human Mind, which first appeared in the year 1749, was lately re-published, with some introductory Essays, designed for its illustration, by Dr. Priestley*.

Man, according to Dr. Hartley, consists of two parts, mind and body. The former is that substance or principle, to which we refer sensations, ideas, pleasures, pains, and voluntary motions; to which also belong the properties of memory, imagination, understanding, and reason: in short, it is the seat of all affections termed mental. The body may be considered in the light of a musical instrument with innumerable chords. These all originate from the medullary substance of the brain, and spinal marrow, and terminate in the senses. They are the immediate instruments of all the mental modifications. Their *vibrations* are the grand physical cause of all the phenomena of the human mind. When a single nerve vibrates, the mind receives a single modification; when two or more vibrate, the mental effects exactly answer. When the vibrations are in one sense, the soul experiences effects appropriated to

* See Crit. Rev. vol. xl. p. 249.

that sense. If the motion, first generated in a particular sense, communicate itself to the fibres of some other, the mind will be analogously affected. If the nervous agitations be regular, the mental process will be regular; if the former, from various external or internal causes, be irregular and discordant, the effects of the mind will be also irregular. If the nerves be strongly or gently moved, the soul will be proportionably agitated; and so on, through the almost infinite series of mental evolutions. Therefore all the phenomena of memory, imagination, volition, reasoning, and every other mental affection, are only so many different mechanical effects, answering to the different vibrations generated in the nervous system. From hence arises the second great member of the Hartleyan theory, the doctrine of the association of ideas.

For a farther explanation of this theory we must refer the reader to Dr. Priestley's late publication, or the view which our author has given of it in these Letters.

According to this hypothesis it seems superfluous to require the presence of an immaterial substance in man: for all is cause and effect, according to the laws of matter. Yet it is certainly absurd and impracticable to resolve the sum total of mental affections into mere mechanical vibrations.

'Dr. Hartley, says our author, sensible of this difficulty, chose to form *his* man of soul and body; but that the spiritual part might have no pretext to glory in its superiority, he invidiously despoiled it of all its high endowments, and bade it servilely submit to all the mandates of the body. Thus the soul, from being considered as a substance supremely active, and gifted with the powers of reasoning, and of ruling the motions of the body, is let down to the level of a being divested of every real faculty, made passive and inert, and solely capable of receiving impressions; as a bit of wax takes every figure which is pressed upon it. That such, he adds, is the soul of Dr. Hartley, I refer to his own Observations on Man.'

In illustrating this theory Dr. Priestley makes the following remark. "So now that we see the laws and affections of mere matter are infinitely more complex than we had imagined, we may by this time, I should think, be prepared to admit the *possibility* of a mass of matter, like the brain, having been formed by the Almighty Creator with such exquisite powers, with respect to *vibrations*, as should be sufficient for all the purposes above mentioned (to generate all the modes of sensation and thought) though the particulars of its constitution and mode of affection may far exceed our comprehension." First Ess. p. 18.

In another place he says: "I am rather inclined to think, that though the subject is beyond our comprehension at present, man does not consist of two principles, so essentially different from one another, as *matter* and *spirit*, which are always described as having not one common property, by means of which they can affect or act upon each other; the one occupying space, and the other not only not occupying the least imaginable portion of space, but incapable of bearing relation to it; insomuch that, properly speaking, my mind is no more *in my body*, than it is in the moon. I rather think that the whole man is of some *uniform composition*, and that the property of *perception*, as well as the other powers termed *mental*, is the result (whether necessary or not) of such an organical structure as that of the brain."

By these and other passages it appears, that Dr. Priestley supposes, that every process, termed mental, in man, may in fact be nothing more than so many distinct nervous vibrations. Our author therefore endeavours to prove, that this doctrine, which he styles materialism, is absurd; and that it is necessary to admit in man, besides the brain, a substance totally different from it. This disquisition he closes with the following demonstration, extracted from a French metaphysical work, intitled Institutions Leibnitziennes.

"Let the brain be supposed to consist of any number of elements: on this supposition, which is certainly admissible, 1. Either the whole brain will be conscious of its existence in such manner, as that its component parts be unconscious of the same; which is a palpable absurdity; since the whole brain is only a collection of parts, and can itself possess nothing, but what is derived from them.—Or, 2. of these elements each will be sensible of its own existence, whilst the whole brain remains insensible: but then the brain itself, the organic system in question, will be void of all conscious perception.—Or, 3. the internal feeling we are in search of, must be the result, the sum total of each individual sentiment; which is equally absurd, for each element is alone conscious of itself, it knows not the feelings of its kindred atoms: we shall have thus as many distinct perceptions, as elements; that is, each element will be severally conscious or perceptive of its own existence; nothing in the whole mass will be able to say, *I* am composed of elements, it is *I* that exist in a compounded and organic state; therefore the whole brain will not be conscious of its existence; yet does not Dr. Priestley perceive that he exists?—I have never seen any attempt made to invalidate the decisive force of this argument against materialism."

In the sixth letter our author takes a view of the doctrine of instinctive principles, as represented by Reid, Battie, and Oswald. And having shewn, that it opens a door to fanaticism, and every enthusiastic conceit, by erecting an instinctive feeling into an universal judge of truth, in every branch of morality and religion, he proceeds to prove, that Hartley's system is equally exceptionable.

'According to the Scotch school, our *principal* stock of knowledge is derived from the dictates of *common sense*; and is therefore the work of nature.—According to Dr. Hartley, the *whole* is from *ideal association*; and is therefore the work of *habit*.—Both principles are equally *necessary*, and equally *infallible* in their operations.—The bodily organs in both are considered as the vehicles or instruments of knowledge, on which when their proper objects act, ideas are generated in the mind, independently of the will, according to pre-established laws.

'The immediate physical cause of ideas Dr. Hartley will have to be *nervous vibrations*: whilst the Scotch doctors without any minute investigation, have recourse to what they call, *constitutional propensities*.—When sensations are raised by the action of bodies upon us, Dr. Hartley goes no farther than the sensations themselves, the immediate effects of impressions: whereas Dr. Reid, &c. insist that, besides the sensations, is at the same time excited the belief of the existence of the objects themselves with their properties; a belief suggested by an instinctive impulse.—But in both systems, every such mental affection is a necessary and mechanical effect, how various or manifest soever.

'The only difference betwixt them seems to be, that Dr. Hartley admits of no effect for which he does not assign, as the proper cause, some nervous vibration; whilst the doctors, without any sufficient reason, are labouring to establish others, which spring up immechanically, but however from some internal impulse. As far therefore as sensations, sensitive ideas, and their necessary Scotch adjuncts go, the dissimilarity of opinion is but trifling; they are all the effects of constitution or pre-established laws.'—

He adds: 'If reason be that mechanical perception, described by Dr. Hartley, never certainly would I quarrel with the man, who should rather chuse to fancy his common sense alone, or any instinctive tendency, a sufficient criterion of truth, without the intervention of any argument. No longer, sir, inveigh against the doctrine of instinct, as destructive of all reasoning and philosophical inquiry; but cordially join hands with Messrs. Beattie, Reid and Oswald, in
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mutually labouring to accomplish the great work, you have begun, of stripping man of every attribute, that is most valuable and dear to him, and of reducing him to the level of the fowls of the air and the beasts of the field.'

Dr. Hartley, as a *necessary consequence* of his theory, maintains the mechanism or necessity of human actions, in opposition to what is generally termed free will. Our author employs the eighth letter in pointing out the fallacy of his remarks in vindication of this absurd and deleterious doctrine.

The last letter contains some observations in favour of the natural immortality of the soul, which Dr. Priestley says, 'had its origin in the heathen philosophy, and has been the great support of the popish doctrines of purgatory, and the worship of the dead.'

In this work the author has displayed a considerable share of metaphysical penetration, and fully exposed the evil tendency and philosophical absurdity of the mechanical system.

FOREIGN ARTICLES.

La Fortification perpendiculaire, ou Essai sur plusieurs Manières de fortifier la Ligne droite, le Triangle, le Quarré, et tous les Polygones, de quelque étendue qu'en soient les cotés, en donnant à leur Défense une Direction perpendiculaire; où l'on trouve des Méthodes d'améliorer les Places déjà construites, & de les rendre beaucoup plus fortes. On y trouve aussi des Redoutes, des Forts, et des Retrenchemens de Campagne, d'une Construction nouvelle. Par M. le Marquis de Montalembert, &c. Tome I, 4to. Paris. With 28 Plates.

LIKE every inventor of a new system, our author begins with demolishing whatever stands in his way; and like a skilful engineer he attacks at once all the ordinary plans of fortification, on every side, with equal success. He batters them with weighty and forcible arguments, drawn from the prodigious and ruinous expence of their construction and repairs; from their short and insignificant resistance to attacks; from their being liable to be taken by surprize; from the ease with which their fire may be silenced, and their being then lost; as they are sometimes, even while their fire yet subsists in all its force; and his batteries are raised on the firm ground of indisputable and recent facts.

Having thus exposed the weakness of places already extant, he proposes to strengthen them by a diminution of the quantity of useless and expensive brick-work, and by the addition of advanced well *casemated* works, capable of making a defence.

For the construction of new places he offers his plan of perpendicular fortification; where the main body of the place admits of advanced, and always well *casemated* works, capable of sustaining the first attacks of an enemy. When these advanced works are lost, the place itself still remains entire, and presents to its assailants perpendicular

pendicular and inaccessible walls. Its fires are disposed in the *casemated* walls, so as to produce their greatest possible effect on the enemy, without being liable to be either silenced, or even hurt by him. It is in these *casemates* the soldiers are lodged, and do their duty; a service so safe and easy, as not to require a numerous garrison.

Were the enemy even to scale the wall, he would still have acquired nothing. The ground would be disputed inch by inch; and beyond these *casemated* walls, he would meet with other entrenchments. Thus doubly and triply fortified, these places would still acquire additional strength, from the superior solidity of their construction, and of their materials. Their vaults should not be covered with pebbles, and three feet deep of earth, by which they are apt to rot, without being always bomb-proof; but their builders would avail themselves of the excellent mastics, so much improved for these twenty years past; by whose means the works become effectually bomb-proof, and their vaults are no more liable to rot.

These are the chief advantages pointed out by M. de Montalembert, in this first part of his work.

In the second part he proposes to enter into yet more curious and interesting details, concerning the fortification of irregular places; and to give very minute and ample plans of his *casemated caponieres*, which he terms, *formidable pieces*; nor will he neglect the fortification of sea-ports. This second part will also be enriched with a new and original tract on field-entrenchments, and on lines of circumvallation.

His designs are grand and interesting; but we must content ourselves with having mentioned them, and leave their practicability and intrinsic merits to be appreciated by the competent judgment of officers and engineers.

Iasi Meccanica o Trattato dei Rimedi naturali Meccanici. 2 Vols. 8vo. Lodi.

DOCTOR Anthony Arigoni, a physician of Lodi, and author of this valuable work, in order to shew that the human body is formed for labour and exercise, without which its health can neither be preserved, nor recovered when lost, enters into a physiological consideration of the body, and particularly of the force of its muscles, and mentions a porter at Lodi, who carries nine hundred pounds weight of flax-seed, on even ground. He then proceeds to a view of the effects of exercise, and its influence on health; to a minute detail of gymnastic exercises, according to the ancients; explains the probable effects of each from mechanical principles; relates the remarkable cures of some soldiers bit by a mad wolf; of a canon, spitting blood, and cured by running; and treats of the effects of leaping, dancing, of the *sciamachia*, in which he places great confidence; and of hunting.

In the second volume, he speaks of riding on horseback; of artificial horses; of the fainter exercise in carriages, and in vessels; of swinging; of electricity; of some cures performed by it, related by Dr. Longi of Piacenza; of music, and its powerful influence on the affections of the mind, and consequently on the health of the body; of frictions; of the cold bath, to whose virtues the famous cure of Proetus' daughters, by Melampus, ought, in Dr. Arigoni's opinion, to be inscribed; of cold baths, in 1774, introduced at Lodi, where

where they are said to have already performed some considerable cures; of swinging; and of hot baths.

The work concludes with general directions to be observed in corporeal exercises.

Unterricht von der Allgemeinen Kräuter- und Wurzel-trocknung, I. Theil, von Zugemüsen, Sallaten, und Gewürzen, wie solche getrocknet und in Kartuse verpackt werden sollen, mitgetheilt von J. Georg Eisen, Pastor zu Torma, in Liefland; or, Instructions concerning the Method of drying Herbs and Roots. Part I. of Pulse, Salladings, Drugs, and the Way of drying, preserving, and packing them; communicated by the reverend M. Eisen, Minister at Torma, in Livonia. 8vo. Riga. (German.)

IT is well known, that the preservation of the health of numerous bodies of soldiers and sailors depends, in a great measure, on a vegetable diet. The difficulty is to preserve herbs and plants fresh, with their flavour and virtues unimpaired; to store them up within a small compass; and to keep them, even in damp places, from rotting. This difficulty appears in this very useful and meritorious tract to be effectually removed; since, by the method proposed and explained in it, herbs are said to be cured in a short time; all their nourishing and wholesome virtues are preserved, and their substance concentrated within so small a compass, that a horse, for instance, carrying twenty puds (of forty pounds weight each pud) transports the substance of eight hundred puds of fresh herbs; and that a soldier may carry sufficient provisions of herbs for one or even two months, in his pocket, and may every day regale himself with a soup of fresh herbs.

Should these assertions, on a farther trial, prove to be facts, one of the most essential desiderata, for sailors especially, will be accomplished; and a service done to every commercial nation.

Ausführliche Nachricht von der geschehenen Unterweisung der taub und stumm gebohrnen Fräulein von Mehding, &c. mit eingestreuten pädagogischen Anmerkungen: or, a minute Account of the Instruction given to Miss Mehding, a young Lady born deaf and dumb, &c. with pädagogical Remarks. 8vo. Leipzig. (German.)

EVERY attempt towards lessening the degree of the sufferings, or for increasing the enjoyments of human life, is entitled to the favour and applause of philanthropes. And as persons unhappily precluded, by the defects of their bodily organs, from unfolding their mental faculties and ideas, and from sharing in the sweets of social conversation, must be commiserated, as passing their life, even in the midst of society, of friends and relations, in a sort of dark, gloomy, and perpetual solitude; the persevering ingenuity, and endeavours of him, who by his instructions succeeds to release them from this irksome and painful state, deserves the warmest acknowledgments, not of such individuals only, but of all their friends, relations, and of mankind in general.

With a fond approbation we have, therefore, of late years, reflected on the meritorious attempts of several ingenious and benevolent men, to introduce deaf and dumb persons to one of the chief enjoyments of life. Those of a gentleman at Edinburgh, for instance, recommended to public attention by the respectable author

of a Journey to the Western Islands of Scotland; some similar, and equally successful ones, lately made at Paris; and now one by the reverend Mr. Otto Benjamin Lafius, at Burgdorf, in the duchy of Zell.

The young lady he took under his tuition knew already what is called the finger-alphabet. He began with providing her, by writing talks, with an adequate stock of words and notions, for social intercourse; and when he was satisfied of her having thoroughly comprehended his information, he proceeded to his religious instruction. The most difficult task was to explain to her the proper use of the particles of speech, and the difference of the auxiliary verbs *to be*, and *to have*. From her written answers, however, she appears to have fully comprehended them, by her understanding. The whole account is instructive and entertaining, especially for philosophers, attending to the gradual progress of the human mind; that of her instruction in the truths of religion, is even highly interesting and pathetic.

By his unwearied assiduity for two years, she was enabled to converse properly by writing, and to give a satisfactory account of her religious ideas and sentiments.

To the relation of his own method and success, our author has subjoined the Essays of Messrs. Bond, Wallis, and Solbrig, on the same subject.

FOREIGN LITERARY INTELLIGENCE.

Das Leben des Herrn Nicolaus Ludwig Grafen und Herrn von Zinzendorf und Pottendorf, beschrieben von Aug. Gottlieb Spangenberg; or, the Life of Count N. L. of Zinzendorf. 6 Vols. 8vo. (German.)

COUNT Zinzendorf's life has been so eccentric, active, and remarkable, that an authentic, impartial, and concise account of this founder of a new religious society, would be acceptable to many readers. The present voluminous work is, indeed, written by one of his most intimate acquaintances, but appears often partial; and is so intolerably prolix, that 1852 pages contain the history of his life only to the year 1750; and make, of course, by far, not yet a complete work.

Das Merkwürdige Leben des berühmten Fürsten Menschikow; or, the memorable Life of the celebrated Prince Menschikow. 8vo. Leipzig. (German.)

Menschikow rose, by Peter's favour, from a pastry-cook's apprenticeship, to the rank of prime minister of the Russian, and of a prince of the Roman empire. His chief merit for acquiring this degree of favour, appears to have been an inexhaustible stock of patient submission to the sudden fallies of that monarch's passionate temper: he hoarded up immense riches by his rapacity and extortions; and was by his excesses involved in disgrace, tortures, punishments, and final ruin.

To this transient meteor, raised and depressed again by a freak of fortune, the character of his consort may serve for a striking contrast. She was sensible, virtuous, and peculiarly solicitous to secure to her children an excellent education.

De uylandische Kapellen voorkommende in Aſien, Africen, en America, verzameld en beſchreeven door Pieter Cramer; or, the exotic Inſects extant in Aſia, Africa, and America, collected and deſcribed by Peter Cramer, one of the Directors of the Society at Fluſhing. Large 4to. with very elegant, coloured Plates. Amſterdam and Utrecht. (Dutch and French.)

A capital work for entomologiſts.

Pharmacopœia Auftriaco Provincialis. 8vo. Viennæ.

Containing a liſt of the ſimple remedies, with ſhort notes; their preparation; and the preſcription of the compound remedies that are always to be kept ready in the ſhops, for immediate uſe. Several of theſe, are new, and peculiar to the Vienna practice.

Exame dell' Articolo di Palermo, città della Sicilia, pubblicato nell' Opera ch' ella per titolo: Encyclopedie, ou Dictionnaire raisonné, fatto da Baſilio de Auſtria, Palermitano, &c. 8vo. Palermo.

On account of the badneſs of the roads, and the ferocity of the inhabitants, the interior parts of Sicily were, for a long time, very little frequented by foreign travellers, and therefore little known abroad. The author of the article PALERMO, in the Pariſian Encyclopedie, had conſulted only Echard, who had copied an error of Chiuſole. Thus miſled, he repreſented Palermo as a city in ruins, of which almoſt nothing remains, except the memory and the name; upon which a zealous Palermitan patriot has here taken up his pen in defence of the flouriſhing ſtate of his native city and country, and eſpecially complains of the expreſſion of the Encyclopedie, that Sicily, at preſent, contains nothing conſiderable but its mountains, and its tribunal of inquiſition.

Il Piemonte Cispadano Antico, ovvero Memorie per ſervire alla Notizia del medefimo, e all' Intelligenza degli antichi Scrittori, Diplomi, e Documenti, che lo concernono; cum varie Diſcuſſione di Storia e di Critica diplomatica, e con Monumenti non piu divulgati, di Jacobo Durandi. 4to. Torino.

A work highly eſteemed in Piedmont for the accuracy of its antiquarian diſquiſitions.

Vue ſur les Sensations, par un Professeur de Mathématiques en l'Université de M. 8vo. A. Milan.

Some new ideas, with critical ſtriſtures on Mr. Locke's and Mr. Condillac's tracts on the ſame ſubject.

Mémoire ſur les Diſſolvans de la Pierre, avec quelques Problèmes de Chymie, par M. Duhaume, M. D. 4to. Paris.

The author of this Memoir ſhews what has been already done, and what yet remains to be done, towards finding a menſtrum capable of diſſolving the ſtone in the bladder, without hurting the bladder itſelf.

Traitement contre le Venia, ou Ver Solitaire, pratiqué à Morat en Suisse, examiné et éprouvé à Paris. 4to. Paris.

An efficacious nostrum, examined, approved, and purchased for the benefit of the public; and here published, by order of the French government.

MONTHLY CATALOGUE.

P O L I T I C A L.

A Letter from Governor Pownall to Adam Smith, LL. D. being an Examination of several Points of Doctrine laid down in his "Inquiry into the Nature and Causes of the Wealth of Nations." 4to. 1s. 6d. Almon.

IN this Letter Governor Pownall enters upon an examination of several positions maintained by Dr. Smith, in his Inquiry into the Nature and Causes of the Wealth of Nations; some of which the writer considers as questionable objects of speculation, and others as theoretical refinements, that might prove of dangerous consequence, if admitted to influence the practice, and regulate the commercial transactions of society. As discussions of such an abstract nature, however, are not interesting to the generality of readers, and especially as we would avoid anticipating any observations which would come with greater propriety from the gentleman to whom the Letter is addressed, we shall decline delivering our opinion of the various points which are agitated. But it would be unjust not to acknowledge, that Governor Pownall displays an acuteness of remark, a clearness of comprehension, such ingenuity of argument, and so much politeness, as claim the most candid attention of the author of the Inquiry.

Take your Choice! 8vo. 1s. 6d. Almon.

The alternatives with which we are here presented are, 'representation and respect,' or 'imposition and contempt;' with 'annual parliaments and liberty,' or 'long parliaments and slavery.' We need say nothing more of these stale and exhausted subjects, than that the author treats them with all the warmth of one who is an enemy to the present establishment.

Letters on the American Troubles; translated from the French of M. De Pinto. 8vo. 1s. 6d. Boosey.

These two Letters deserve to be considered among the most sensible productions which have appeared relative to the contest with America. The author disproves the absurd pretensions of the colonists with great clearness and strength of argument, at the same time that he confirms the expediency of reducing those deluded people to submission by force of arms, when the more pacific means of reconciliation proved ineffectual.

P O E T R Y.

P O E T R Y.

The Genius of Britain to General Howe, the Night before the Battle at Long Island. An Ode. 4to. 1s. Sewell.

After delineating the mournful state to which the disaffected provinces of America are reduced by the folly of the inhabitants, the address concludes with some sentiments respecting the disagreeable necessity of an exertion of valour in the action which is supposed to ensue. The verses breathe at least a spirit of loyalty, and are written in a strain of poetical description.

The Patriot's Progress, or the Post of Honour disputed: a Familiar Epistle, inscribed to John Wilkes, Esq. 4to. 1s. Wallis and Stonehouse.

A squib for the domestic incendiaries, and American demagogues; but more conspicuous for zeal than poetic merit.

Jane Shore to her Friend: a Poetical Epistle. 4to. 1s. Becket.

This fictitious epistle is supposed to be written a little before the catastrophe of the royal paramour, when she felt all the pungency of remorse for conjugal infidelity, which the expectation of her approaching fate could inspire. The epistle accordingly abounds with sentiments of the deepest penitence, which are expressed with elegiac tenderness, and pathetic energy.

Milton's Italian Poems, translated, and addressed to a Gentleman of Italy. 4to. 1s. Becket.

The present version is addressed by the translator, in a poetical dedication, to Sig. Mozzi, of Macerata, an Italian gentleman of taste and genius. In these sonnets Dr. Langhorne has preserved the spirit of the original, though the structure of the rhymes are formed upon a model which is not the most agreeable to the ear.

The Triumphs of Fashion, a Poem, containing some Hints to the fashionable World; with a Word to the Saints and the Nababs. Part I. 4to. 1s. 6d.

A vein of unreserved and poignant invective runs through the whole of this poem, which seems, however, to be but indifferently calculated for answering the great purpose of moral satire. By appearing too particular for general similitude, and too indefinite for personal application, we behold the characters only in the light of imaginary portraits, and the sentiments as the ingenious effusions of an author, whose object is rather to entertain with vivacity of sarcasm, than expose to public view any real delinquents in life. Let us acknowledge, at the same time, that this writer discovers a talent for satire, which, if directed with a more determinate aim, might make a deep impression on those who should be rendered conscious of the guilt either of folly or vice.

The Devil: a Poetical Essay. 4^{to}. 1s. 6d. Doddsley.

This poetical Devil is not the frightful monster, which is sometimes painted with a tail, a cloven foot, horns, and saucer eyes, a mouth glowing like a furnace, and brimstone flaming through his nose, but a fiend in human shape.

————— ‘ If I rightly ween,
The gallant Belzebub is seen,
A charming youth, with curls and laces,
Drest by the hands of Loves and Graces;
While Satan, worst of deadly finners,
Shines forth in petticoat and pinners.’

According to this representation, the humble, debonnaire, polite, adoring lover, is sometimes—a devil incarnate:

‘ While hapless damsels, fond to win him,
Too late perceive the devil in him.’

In like manner, the fine lady, who before marriage is all sweetness and complacency, and endowed with a thousand amiable accomplishments, is afterwards discovered to be—a fallen angel, or, as our author expresses it,

‘ A smiling, false, infernal vixen.’

This is an ingenious thought, capable of being worked up into an elegant poem; as the devil might be exhibited, like the Proteus of Homer, under various forms. But the author has pursued no regular plan; his performance therefore seems to be inferior to what his genius might have produced.

To the Memory of the late pious Mr. Thomas Wilton. 8vo. 4d.
Buckland.

The generality of eulogies descend into the tomb with those they praise. The present, though it may be exempted from this immediate interment, will neither render the hero nor the bard immortal.

The poet begins:

‘ Fain would Urania touch her trembling strings,
And joy in death be still the theme she sings!
Long has her slender reed untun’d lain by;
On such a subject, yet be bold to try:
What better tribute can affection bring,
Or sweeter theme excite the muse to sing!’

The second line can have no dependence on the first, and is therefore ungrammatical. What Urania wishes to touch is said, in one line, to be a *stringed* instrument; in another, to be only a simple *reed*. In the fourth verse there is a command *to try*—some project; but, as the Muse is only mentioned obliquely, there is no person to whom the command is addressed.

D R A M A T I C.

The Contræ. A Comedy of Two Acts. As it was performed at the Theatre Royal in the Hay-market. 8vo. 1s. Davis.

An imitation of a French piece intitled *l'Amour usé*; but has little claim to the wit and spirit of the original.

M E D I C A L.

Practical Observations on the Cure of Hectic and Slow Fevers, and the Pulmonary Consumption: to which is added, a Method of treating several Kinds of internal Hæmorrhages. By Moses Griffith, M. D. 8vo. 2s. White.

We are informed by Dr. Griffith, in this pamphlet, that in hectic fevers, not accompanied with any great degree of heat and thirst, or evident signs of inflammation, he has for many years used the following medicine with great success.

R Myrrhæ drachmam unam
Solve terendo in mortario cum
Aquæ alexeteriæ simplicis unciis sex cum semisse,
— cujuslibet spirituosæ drachmis sex, vel uncia
unâ;
Dein adde *
Salis absinthii drachmam dimidiam,
Salis martis grana duodecim,
Syrupi simplicis drachmas duas.
Fiat mistura, in haustus quatuor distribuenda, quo-
rum unum capiat mane, horâ quintâ post me-
ridiem, et horâ decubitûs.

The author also informs us that he has used the same method, with equal success, in slow fevers attended with a low pulse, not

* ' Though I have always ordered the medicine to be made up in this manner, yet I find by a late enquiry, that it has likewise been made up sometimes—by rubbing the salt of wormwood with the myrrh, and adding the waters, and then the salt of steel; and some-
times—by first rubbing the myrrh fine with the salt of wormwood, then adding the salt of steel, and after rubbing them a little toge-
ther, quickly pouring in the waters.

' I have not been sensible of any difference in the effect, in which-
soever of the three ways the medicine was made up. Yet, upon
carefully comparing together the several compositions, that, in
which the salt of wormwood was first rubbed with the myrrh, the
waters then added, and the salt of steel last of all, plainly appeared
to me the most uniform mixture. It kept its colour much longer
on standing; deposited a lighter sediment; and upon being shaken,
united more easily than either of the other two; and it therefore
may deserve the preference.'

much heat, loss of appetite, dejection of spirits, restless nights, and disturbed sleeps. 'Likewise, says he, after long and severe fevers, that have broken down the constitution, and are often succeeded by lowness, want of appetite, and night sweats. In the slow fever, which often attends a *chlorosis*—Also, after the blood has been drained, and the body weakened, by a large discharge of matter from a succession of abscesses—After large hemorrhages, which leave behind them a slow fever—In intermittents, where either the bark has failed, or may have been improper to be given—And also, where the intermittent has been removed, and a slow, lurking fever remains, attended with weakness, loss of appetite, dejection of spirits, and night-sweats—In short, I may venture to say, in almost every case, where the bark may seem to be indicated, but where either its disagreeing with the stomach, or some particular circumstances forbids its use.

'In intermittents, I have generally given it four times a day, with rather a less dose of myrrh, and a larger of salt of worm-wood; and I have always ordered chamemel-flower tea to be drunk with it, or between the doses.'

In hectic, which are attended with a cough, and difficult expectoration, Dr. Griffith admits that soft, oily, healing medicines, taken in small quantities, occasionally, will be necessary; and he also recommends the discretionary use of paregoric elixir, corrected, if requisite, with oxymel of squills, oil of sweet almonds, or the like.

To confirm these observations, the author presents us with a variety of cases, of the hectic kind, accompanied with the cases of two patients, who were cured of a diabetes by the same remedy, after the common methods had been used without success. Along with this medicine he advises that, in hectic disorders, bleeding be used according to the urgency of the symptoms; and that nitre be administered in cases accompanied with inflammation. In pulmonary consumptions he also recommends garden-snails as peculiarly salutary; and infers, from two cases, that in the inflammatory hectic, particularly in children, very beneficial effects may be derived from the use of a warm or tepid bath.—Besides hectic fevers, and the diabetes, Dr. Griffith, upon the authority of one instance, is of opinion, that the prescription abovementioned will also be serviceable in the fever which often accompanies the kind of madness that inclines to melancholy, and is attended with a restlessness and anxiety.

An appendix is added, containing a case in confirmation, that large quantities of salt of steel may be taken without heating: and likewise a method of treating several kinds of internal hemorrhages, for which purpose the author chiefly recommends cold-drawn linseed-oil, with tincture of rhubarb sufficient to keep the body gently open.

The

The whole treatise bears evident marks of the benevolence and ingenuousness of the author; and on these accounts it is particularly entitled to attention, however the propriety of chalybeates, in advanced stages of the hectic fever, may be repugnant to general opinion.

Every Woman her own Physician; or the Lady's Medical Assistant. Containing the History and Cure of the various Diseases incident to Women and Children. By A. Hume, M. D. Small 8vo. 2s. Richardson and Urquhart.

Though we are not satisfied with respect to the safety of endeavouring to accommodate medical practice to the capacity of those who are totally unacquainted with the principles of the science, yet the present treatise appears to possess at least equal merit with the other productions of the kind, and may be useful to such ladies as will dabble in the art, without the assistance of a physician.

A new Method of curing Diseases by inspecting the Urine, explained: as practised by the German Doctor. 8vo. 1s. Bew.

This pamphlet contains a narrative of facts and cases, tending to confirm the charge of imposture, lately exhibited to the public against a noted empiric. As the evidence is anonymous, it seems to have been the author's design rather to urge the German doctor with ridicule, than with authenticated proof of his guilt, which appears to be already fully evinced by Dr. Lettsom's observations.

The Impostor detected; or the Physician the greater Cheat: being a candid Enquiry concerning the Practice of Dr. Mayerbach. 8vo. 1s. 6d. Wilkie.

We should think it were an insult offered to the public, to enter any farther into the merits of the altercation, which is the subject of this pamphlet. The evidence already produced by Dr. Lettsom was too decisive to be invalidated by the cases and arguments with which we are now presented in favour of Mayerbach; and we cannot refrain from expressing a desire, that the College of Physicians would interpose their authority for checking the progress of an empiricism, so pernicious to the community, and so disgraceful to medical science.

D I V I N I T Y.

Truth and Error contrasted, in a familiar Dialogue: in which are clearly shewn the mistaken Notions of Mankind, relative to their present and future State, to the Resurrection and Judgment, to Heaven and Hell, and Life and Death. 8vo. 1s. 6d. Leacroft.

This work consists of a dialogue between *Sarx* and *Pneuma*, the *Flesh* and the *Spirit*, in which the author maintains, that mankind

mankind entertain mistaken notions of a resurrection; that it is not after this life, but in these bodies it is to be looked for; that St. Paul did not pray to know Christ, and the power of his resurrection, after his body was buried in the earth; that when a man is turned from darkness to light, and from the power of Satan unto God, he is risen with Christ, and experiences the power of his resurrection; that the natural body, of which the apostle speaks, is sown in the womb, and not when it is committed to the ground; that the judgment-seat is in every man's heart; that it is there the judge sits, and there only, that a man can or ever will feel acquittance or condemnation; that in every heart, where Christ is formed, there he sits on the throne of his glory, enlightening and illuminating the soul; that those, whom he illuminates, are the sheep on the right; those, who are in the dark, and under the power of Satan, are the goats on the left; that every awaked soul knows and feels, that Christ is come to judgment; that he has experienced the judgment in himself, being able to look back and see, when he was a goat on the left, and being now light in the Lord, his state is reversed, and he stands at the right hand of God; that all, who are alive at this instant, stand before the judgment seat of Christ; and that judgment is now going on, and will proceed on all men to the last day, when the fire will begin its office of separation, and good and evil will no more dwell together; that nature fallen from God, disunited and separated from him, constitutes and solely makes a kingdom of hell; that a soul departing this world without partaking of the divine nature, has all the hell belonging to it, both within and without, that devils feel, who are themselves in the like state, viz. without one spark of divine nature; that consequently hell and heaven are no particular places, but only two states and conditions of existence, felt by the happy and unhappy, by angels and devils, &c. &c.

In the postscript the author offers the following hint to the public, respecting the recovery of those who are mad, and given up as incurable.

'When madness breaks forth, the first care of the physician is to reduce and keep his patient low, in order to check the velocity and whirl of his thoughts; and if possible to procure sleep, by quieting the internal turbulency. If all his skill and efforts fail, such a person is as much lost to society, as if he *was* dead. Now if such an one *was* plunged into water, and there kept till he *was* apparently dead, and *was* then recovered by the usual methods, and of which recovery we have now a moral certainty, I am apt to believe we should behold a perfect cure.'

This writer, who seems to be a quaker, proposes his notions with an air of arrogance and self-sufficiency, treating the opinions of all other men, besides himself, as 'the idle whims, and

and silly conjectures of unenlightened scholars.' The language of such a braggard, if he should speak Latin, would be

—*Apagete, homunciones, vermiculi!*

Sublimi feriam sidera vertice!

An Argument for Natural and Revealed Religion. By the Rev. James Williamson, M. A. 8vo. 6d. Rivington.

Upon taking up this pamphlet we expected to find some new argument, clearly stated, and properly illustrated and enforced, by a series of apposite remarks, producing a natural conclusion, and irresistible evidence. But after an attentive perusal, we could discover no uniform design; but only a few hints and observations, calculated to shew, that the odious name of prejudices will fit the conceits of free-thinkers much better, than those principles, which, by operating universally and consistently in all ages, and in all circumstances, prove, that they come from God.

The author seems to be capable of reasoning with much greater perspicuity.

A serious Exhortation to the due Observance of December 13th, being a Day appointed for Public Fasting and Prayer. Price One Penny, or 25 for 1s. 6d. Rivington.

A pious and seasonable tract, drawn up in a plain style, and calculated to remind the common people of their duty to their sovereign, their country, and their Almighty Protector; but more especially to excite them to a due observance of the day appointed for public humiliation.

CONTROVERSIAL.

The Harmony of Truth; an absolute Confutation of all Infidelity, addressed to Mr. L——y. 8vo. 1s. Law.

In the last volume of our Review, p. 407, we mentioned a pamphlet by the author of this publication; and observed, that it contained some general animadversions on the presumption of those, who impugn the doctrine of the Trinity; but nothing more *argumentative* or *important*. Hold, says the author, it contains this unanswerable argument: 'As long as the testimony of conscience against sin universally resides in man, and the Deity is acknowledged to be just and unchangeable, it is impossible to reconcile those attributes with the favour of God to creatures in such a state, without the interference of the divine nature itself, by way of atonement and reconciliation; and that without such a sacrifice, &c.' To this we reply, that the *divine nature* could not be made a sacrifice; as the godhead is impassible, or incapable of suffering. Our author's argument is therefore a mere declamation; and as this is the chief, if not the

the only argument in his book, we cannot see the impropriety of our remark.

But, says he, 'your notions of *importance* I cannot comprehend. Of all doctrines this is the most *important*.'—Therefore he concludes, that his tract is important. A little logic might have shewn him, that the doctrine and the tract are two different things. The one may be important, and the other totally insignificant.

This work is addressed to Mr. Lindsey. What others may find in it we cannot tell. All that we can discover is a *zeal* for what he supposes to be the truth.

A Vindication of Dr. W——n, or an Answer to a Pamphlet, entitled Remarks, &c. 4to. 6d. Rivington.

The author of this publication produces the authority of Grotius and Puffendorf, in defence of some principles and positions, in Dr. Watson's discourse *, relative to the natural equality of mankind, which had been objected to by the writer of the Remarks. He answers a number of queries proposed by his adversary; and exhibits a list of paradoxes, which, he says, are the very essence of his late pamphlet.

The author treats his antagonist, whom he supposes to be an undergraduate, very cavalierly; calling him 'a wretched ontologist,' and 'a miserable pamphleteer.'

M I S C E L L A N E O U S.

The North-American and the West-Indian Gazetteer. Containing an authentic Description of the Colonies and Islands in that Part of the Globe, shewing their Situation, Climate, Soil, Produce, and Trade; with their former and present Condition. Also an exact Account of the Cities, Towns, Harbours, Ports, Bays, Rivers, Lakes, Mountains, Number of Inhabitants, &c. Illustrated with Maps. 12mo. 3s. sewed. Robinson.

An accurate and minute description of a country which is the seat of an important war, can never fail of proving particularly useful to the public. In this view, the present work, both in design and execution, must afford gratification to every reader. We here meet with such a full, clear, and authentic account of the American continent, and islands, respecting not only their geographical, but commercial situation, as is not to be found in any other production of equal compass. The compiler appears to have copied his materials from the best authorities, and to have bestowed on the whole subject a degree of attention, suitable to the interesting light in which it is at present universally considered in these kingdoms.

* See Crit. Rev. vol. xli. p. 482.

Practical Perspective. Being a Course of Lessons, exhibiting easy and concise Rules for drawing justly all Sorts of Objects. By H. Clarke. Vol. I. 8vo. 6s. Boards. Nourse.

In the preface the author gives the following short account of this work; 'The principle, upon which this method of perspective is founded, is so obvious to the understanding, that it is a matter of surprize it has not been universally received by the connoisseurs. For what can be more easy to conceive, than, if a plane of glass be set betwixt our eye and an object, that the rays, in passing from the object to the eye, will, by their intersection with the glass, there exhibit an exact representation of whatever the eye is directed to. The business then of this method of perspective (and it is the only rational one) appears to be nothing more than the finding of those points of intersection. This is done in lesson 1. in so plain and simple a manner, that the method of operation is known by a bare inspection. Indeed, the demonstration given to this fundamental proposition, may not be comprehended by every one; but, perhaps, to such it may be thought a sufficient proof of the truth of the operation, to find, that when the planes are all brought into one, or extended on the ground plane, the thread, or visual ray, still intersects the picture in the same point, in a straight line to the eye.

'When the first lesson is clearly understood, the main point is accomplished. For as lines, planes, and solids, of whatever figure, may be easily conceived to consist of points, the perspective of them may be found by this one general rule. This alone I have often found sufficient to several grown persons, to let them into the whole practice of perspective. But (as Mr. Locke observes) since we always find the minds of youth are opened by degrees, and that it is exercise alone which opens them, it is necessary for them to go through a regular course of lessons, in order to see the application of this rule to different objects. Having therefore shown the method of finding the perspective of a point, I have proceeded to lines and planes situated on, and parallel to, the ground plane; then have gone to lines, planes, and solids perpendicular to that plane; and then shown the perspective of lines, planes, and solids inclined to the same plane. And in this last I have been the more particular, as it is a part of perspective which is seldom understood. I do not know any that has rendered it practical, but Kirby. I have thence proceeded to sciagraphic perspective, which, as it is a very essential part in drawing, I have considered every way, both from the sun and candle. The rules for catoptric perspective are next given, when the reflecting surface is parallel, perpendicular, and inclined to the horizon. I have then exhibited the nature of theatrical perspective; and also shown the

theory of horizontal pictures, or cieling-pieces. And have concluded the first volume, with a practical method of taking perspective views without the assistance of any instrument.

'In the second volume I have shown the application of the foregoing rules to a variety of subjects; as in architecture, to the perspective elevations of the orders, arches, doors, niches, &c. with the perspective of various modes of buildings, squares, streets, avenues, &c. in geography, to the projections of the sphere, for the construction of maps, charts, &c. in astronomy, to the construction of celestial planispheres, analemmas, astrolabas, dials, &c. as also to the construction of transits, solar and lunar eclipses, &c. I have also translated from that excellent Italian piece, *Trattato della Pittura di Lionardo da Vinci*, his observations on the *keeping of aerial perspective*. And have concluded the whole with some useful hints to painters for the mixing of colours, on the principle of Sir Isaac Newton's theory. The inverse method of perspective I have omitted, as being of little or no use; for any person may find the vanishing line of a perspective view, by producing any two lines which are perspectively parallel, till they intersect each other; for that point of intersection will always be in the vanishing line. Neither have I said any thing of the mechanical methods of taking views, copying prints, &c. as thinking these beneath the attention of the real artist, who is seldom inclined to have recourse to such helps. A camera obscura, indeed, is sometimes useful in taking the perspective view of a town; as it is not a very easy matter to draw such a number of objects all in true proportion, merely by the eye. But when the view is not crowded, nor very extensive, the method I have before laid down should always be preferred. In the catoptric perspective I might have shown the principles of the anamorphosis, and their rectification; but as this hath not an immediate relation to the common practice of perspective, I thought it would be rather leading the learner out of his way, and have therefore omitted it also.'

This extract pretty well explains the manner in which the subject of perspective is laid down in the book. It may suffice to add, that the author's mode of teaching and explanation is very clear and instructive; the definitions and lessons being equally simple, copious, and satisfactory. The nature of perspective is also well explained, and clearly illustrated, by folding and moveable schemes.

The schemes and plates, which are numerous, are also neatly executed. But, instead of two volumes, the whole might easily have been comprised in one of a moderate size.

An Oration delivered at the Dedication of Free-Masons' Hall, Great Queen-street, Lincoln's-Inn-Fields, on Thursday, May 23, 1776. By William Dodd, LL.D. G. C. 4to. 1s. Robinson.

When pompous and magnificent epithets are applied to considerable objects, they naturally excite emotions of ridicule, in hearers even the most candid and averse to sarcastic observation. This remark was perhaps never more strongly verified than in the dedication prefixed to this piece of rhetorical extravagance; in which, as well as in the subsequent pages, it is hard to say whether indignation or contempt be the passion most uniformly provoked. Had the orator however restricted himself to declaiming on the mysteries of masonry, we might have pardoned an affectation which derived some claim to indulgence even from the reputed frivolity of the subject. But when we find a reverend gentleman gravely sacrificing the dignity of philosophy to the grandeur of free-masons, the bombast of the speaker is no longer entitled to lenity, but calls for the animadversion of every friend of decency, truth, and science. As this rhapsody has been published by the general request of the lodge, it appears to have met with the unanimous approbation of the fraternity. By less interested judges, however, it will probably be considered, with greater justice, as a burlesque on those mysteries which it has been intended to celebrate.

The Child's Directory; or easy Lessons, in four Parts. Designed for the Use, Instruction and Improvement of Children and Youth. Part I. A Collection of Scripture Sentences. Part II. The Ten Commandments explained. Part III. Against Inactivity, Sloth, and Idleness; on Compassion and Cruelty. A Summary View of the Things that are lovely. Part IV. Hymns, Forms of Prayer, and the Lord's Prayer. To which is prefixed, an Address to Children on good Behaviour. By James Walder. 12mo. 4d. Buckland.

Mr. Walder thinks, that the generality of people take more pains to give their children a polite education, than to make them virtuous, or useful members of society. He therefore wishes to recommend these plain and easy lessons to the attention of children and youth, in order to inspire them with sentiments of virtue and religion; to guard them against the influence of bad example; against pride, vanity, lying, slander, and other vices; and to lead them on to the belief and practice of moral, social, and religious duties.

The title page sufficiently specifies the contents. We shall only add, that the author is a serious and sensible protestant dissenter, and his lessons plain, pious, and rational.

State

State of the Goals in London, Westminster, and Borough of Southwark. By William Smith, M. D. 8vo. 1s. 6d. Bew.

If this pamphlet could be considered as a proper object of criticism, we should not hesitate to pronounce it, with respect to style and composition, a very contemptible performance: as the subject is of an important nature, we hope proper enquiry will be made into the truth of that information which the author has laid before the public. His account of the King's Bench requires a very serious answer from the marshal of that prison.

Observations on the Art of Brewing Malt Liquors; in a Series of Strictures on a secret System, inculcated in a private Course of Lectures on Brewing, lately delivered to several eminent Initiates in that mystic Mode of Practice; to whose Perusal they are particularly dedicated. By a Practical Brewer. 8vo. 2s. Wilkie.

We learn nothing more from this Practical Brewer, whose strictures are equally profound as his subject, than that he pretends to greater knowledge in a *mystical* art, than others who have been initiated in all the secrets of the system.

E R R A T U M.

By a mistake, the following note was omitted at p. 343. l. 11.

* Mr. Pope, in a letter to a friend, thus warmly vindicates Dr. Garth against those, who charged him with infidelity in his last moments. "The best natured of men, says he, sir Samuel Garth, has left me in the truest concern for his loss. His death was very heroical; and yet unaffected enough to have made a saint or a philosopher famous. But ill tongues, and worse hearts, have branded even his last moments, as wrongfully as they did his life, with irreligion. You must have heard many tales on this subject; but if ever there was a good christian, without knowing himself to be so, it was Dr. Garth." Pope's Letters to several Persons, let. viii.

Whether Mr. Pope had, or had not, any particular person in view, when he speaks of "ill tongues and worse hearts," cannot easily be known. It is probable he might glance at Mr. Addison. The animosity between Addison and Pope, concerning the translation of the Iliad, commenced in 1715; and this letter was written soon after the death of Dr. Garth, which happened Jan. 18, 1718-19. Berkeley's writing the Analyst is a presumptive argument, that the report in question was not entirely groundless.

